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EDITORIAL—SOME HIGHLIGHTS

I General Economic Scene

State:

Climate and Prices: The climate in June was somewhat less hot than that reported in May, with rains in the southern parts of the State beginning to fill the irrigation tanks and hydel reservoirs, which in part resulted in the easier power situation to be referred to later. The drought hit areas continued to suffer from water scarcities, with the government continuing its programme to provide the villages with bore-wells and appealing to industrial units to adopt such drinking water scarce villages for construction of wells at a cost of Rs. 15,000 to Rs. 20,000 per well. Prices in the State remained at the high level reported in the last issue (see p 363). FCI reported that it held in the Southern Zone 3 million tonnes of foodgrains valued at Rs. 100 crores—1.2 million tonnes in rice and 1.8 million tonnes in wheat. Rice procurement in 1977 was 10,000 tonnes compared to 42,000 tonnes in 1976—the steep fall in procurement was in Andhra Pradesh from 5 million tonnes in 1976 to 60,338 tonnes in 1977—an indicator of low rice production in both States. Rice allotment to the State in May and June was 50,000 tonnes each. The Corporation is producing a special food for the school's mid-day meal programme this year. 28,000 tonnes of this food, Balahar, are being produced. The problem with the food-grains stocks in the State is storage. Two thirds of the wheat stocks are stored in the open in 10 air strips and despite prophylactic treatment by quality control staff, the stored grain is falling in standard. There is need for the Corporation to intensify both its godown construction programme and the renting of godown space to save this valuable stock. Another problem is the uncleared stocks of foodgrains and pulses in the Royapuram and Tondiarpet railway yards which are being checked by the State Civil Supplies Corporation to determine the extent of their deterioration. The wharfage charges have been sharply increased (from 50 paise to Re. 1.20) to ensure quicker clearance of these food articles and so to prevent their spoilage. The government also reports that through the Union government's Save Grain Campaign (see Vol. VII p 276) in 1,750 acres of land and 200 houses in Koothapar village in the Tiruchi district, Rs. 2.4 lakhs of grains were saved by the farmers discussion group in the village. This was achieved mainly through a successful rodent control campaign.

CSO's monthly statistics reports a sharp rise in industrial workers consumer prices towards the end of 1976—from 289 in October to 298 in November, a 3.5 per cent rise. Rural consumer prices also moved up sharply from 291 to 305 and declined marginally to 304 in December. The major reason for this sharp rise in October–November was because food prices rose by 17 points in that period. Urban prices during the period rose moderately by 3–4 points. With prices in Tiruchirapalli maintaining a higher level than Madras from August–November.

Power: Continuing the improved power supply in the State from the third week of May as reported in the last issue (p 364), the government from June 1 removed completely the 25 per cent power cut on essential services, newspapers and LT industrial consumers and removed the ceiling of 250 units per month on domestic consumers. This improved power situation was due to the four units of Ennore functioning well, and Neyveli supplying 9 millions units per day to the State grid and the filling up of the hydel reservoirs except Kurdah where the inflows were poor. Kerala has offered the supply of 1,500 to 2,000 million units of electricity for the year and on this basis the 30 per cent power cut for HT consumers might be lifted in July. In July also the second inter–State transmission line between Kerala and Tamil Nadu, the Pamba–Kayathar line, will be completed. The capacity of this inter–State second line is 4 million units per day which will double the power supply from Kerala which on the single inter–State Pasumalai line to date has been 4 million units per day. To lift the 30 per cent cut on HT consumer in the State, 3 more million units will be needed, which the second inter–State line, can supply. In June the heavy rains resulted in flooding of the Neyveli mines which led to reduction in Neyveli supplies for a few days. The State government has sent to the Union government a proposal to set up a 210 MW thermal plant at Neyveli as part of a short term power augmenting measure for the State. As a result of the Rs. 100 crore modernisation scheme, NLC will increase its lignite production to 6.5 million tonnes by 1980–81 and this increased production can be used to run the proposed 210 MW plant. In the Tuticorin thermal plant the first unit of 210 MW is expected to be commissioned in December 1978 and the second unit in June 1979. The Union government has been requested to approve a third 210 MW unit which the power demand of the State calls for and the infrastructure built at Tuticorin can well accommodate. There is also the Fifth unit at Ennore which is about to be stabilised and the request of the government for setting up three 50 MW gas turbines in 3 stations at a cost of Rs. 63 crores under study by the Union government. These action plans are in line with the recommendations made by an expert group composed of the DGTD and the State's industrialists (see Vol VI p 304) whose short term suggestion is to develop a contingency plan to meet unexpected failure in generating equipment and transmission lines due to natural disasters and delays in supply of coal, fuel oil etc., including a system of priorities and regulatory methods to meet each of the above contingencies. Its long term recommendations for the State include the creation of a total capacity of 200 MW of power, through 4 gas turbines generating sets of 50 MW each at load centres of Madras, Coimbatore, Madurai and Tuticorin. It also recommends developing all hydro electric resources of the Southern States, Kerala, Karnataka and Tamil Nadu have the possibility of generating at least 10,000 MW of power

from the Western Ghats water resources. Given the full use of the State's hydel resources and including the power resources that will be available from the Tuticorin, expanded Neyveli and Kalpakkam (atom) plants, the group recommends the setting up of more engineering and other non-power intensive employment oriented industries, while at the same time developing ocean based chemical industries on the coast which can function at full capacity for a month and use the lean summer months for maintenance work and on which industrial growth depends.

The power situation in June in the country continued with shortages suffered by the North Western States as a result of the depletion of the Bhakra system. Industrial production in Haryana, Punjab, Delhi and Uttar Pradesh was seriously cut back because of power shortage. Mini steel units facing a 100 per cent power cut had to close down completely in these States. The Karnataka power situation continued to be very bad with the 55 per cent power cut likely to continue till June 1978. Against a total need of 8,000 million units, largely due to poor Linganamakki's reservoir position there is a gap of 2,800 million units. For June there was some relief due to the closure of the strike bound Belgaum Indian Aluminium which consumes 18 per cent of the State's power. Plans are underway to instal a 220 MW thermal unit (fabricated by BHEL) at Mangalore, which will provide some relief. The Energy Ministry has begun work on the power needs of the Sixth Plan. It starts with the additional power needs of this and next year—the last two years of the Fifth Plan—estimated at 7 million KW leading to adding 1,000 MW already sanctioned for the VI Plan. 6,000 MW are at different stages of construction and the balance will be decided when the 10th annual power survey report is published in July. The ministry reports that the performance of the thermal stations has been improving—the load factor being 52 per cent in 1975-76 and 60 per cent in 1976-77 at 1,500 MW thermal and 1,000 MW hydel which will be added. Saudi Arabia is lending $ 100 million to finance the 2 Andhra Pradesh power projects in Sri Sailam and Nagarjunasagar. The Sri Sailam project will set up four 110 MW units, with a further 3 units later at a total cost of Rs. 203 crores. The Nagarjunasagar project is to be commissioned in August and its completion will cost Rs. 15.60 crores. BHEL is now equipped to produce the large, sophisticated 500 MW power generating sets. It has completed the basic design work on an indigenous set and can with some additional balancing equipment move into production when the government gives it the green signal. Also the preliminary work for the third stage of the Idukki hydro electric project has started, with one of the 3 dams required by the project—the Kulamaru dam—being completed. When ready this stage will generate 376 million KW by 1980.

Water : The technical experts committee on the sharing of the Cauvery waters will submit its report to the 3 States governments by July end. Simultaneously the committee of secretaries of the 3 States will submit its report on the functions, rules and procedure of the Cauvery Valley Authority. These reports when submitted will be examined by the end of the year by the Chief Ministers of the States concerned to arrive at an agreement on this urgent problem. Mettur reports steady inflows of 1,300-1,800 cusecs per day in June

against a drawal of around 500 cusecs per day.

Kudiyiruppu Act : The government notified in Mid June that the Occupants of Kudiyiruppu (Conferment of ownership) Act 1971 will be applicable to plantation areas. This means that the Act will cover the Nilgiris, Yercaud, the sub-taluk, Rajapalayam sub-taluk and certain villages in Madurai, Tirunelveli, Kanyakumari and Coimbatore districts.

Transport : In the Madras Port outer harbour—the Bharathi Dock—the Rs. 24 crores mechanical ore handling facility was commissioned on June 16. Iron ore was loaded at the rate of 2,000 tonnes an hour into the ship carrying it to Germany. The system consists of 2 streams each capable of loading ore at the rate of 4,000 tonnes an hour. The first stream was started in June and the second stream will in December at which time in place of the 8,000 tonnes loaded per day, 8,000 tonnes will be loaded per hour. The loading machinery was fabricated indigeneously by MMTC. The high power transport committee appointed in October of last year (see Vol VI p 635), has recommended against the merger of the 7 State owned Transport Corporations in the interest of efficiency. It has recommended a 4 per cent increase in transport facilities every year upto 1965 to meet the growing demand. Also it has suggested that in view of the very heavy work load of the drivers of all the Corporations, their emoluments should be increased proportionately.

Housing: Yet another extension of the deadline for filling statements under the Tamil Nadu Urban Land (Ceiling and Regulation) Act concerning vacant land in excess of the ceiling limit was announced in June to September 30. Also the government has appointed the secretary, Tamil Nadu Housing Board as the competent authority under the Act for lands or buildings to be alloted by the Board in the Madras Urban area. The Executive Engineers of the housing unit in other urban areas will be the corresponding competent authority. What is really needed is to repeal this Act and start all over again with the help of an expert committee for this State.

Pay and Allowances for Government and Other Staff: As a result of representations and agitations of the staff, the government decided in June that the Third Pay Commission would set up to review and make recommendations concerning the wage structure of all government staff. It also decided to grant the staff an interim relief of Rs. 10 per month as from July 1. This covers also employees of local bodies and teachers and totals 7.3 lakh staff. The cost of the interim relief is Rs. 8.8 crores per annum. The membership and terms of reference of the Third Pay Commission will be decided by the newly elected government which takes office on June 30. The government also revised in June the minimum wages paid by local authority as from July 1. For employees of corporations and municipalities the revised wages range from Rs. 130 plus Rs. 10 special allowance for unskilled grade I employee to Rs. 170 for skilled grade I, and for employees in village panchayats from Rs. 104 plus Rs. 10 per unskilled grade I to Rs. 150 for skilled grade I employees. The Dearness Allowance varies from Rs. 85 to 95.

Welfare Measures: The government decided in June to tighten the measures aimed at enforcing prohibition. From

June liquor permits are not to be issued on health grounds but only to those who declare themselves to be confirmed alcoholics and addicts. Government emloyees are required to surrender permits and are banned from drinking. The government reports that in the period January–June 1977, 60,000 permits had been issued and some of these permits were easily obtained even from liquor shops. Simultaneously action against illicit distillation is being strengthened and neighbouring States are being requested to create a dry belt around this State. The number of persons affected by the tightening of the liquor permits is small but they are a rather vocal group. There is the question of the effectiveness of legislation in this welfare area and the desirability of action in one State being part of a national policy and programme.

National:

Economic Survey: The economic survey presented to the Lok Sabha for the year 1976–77 in June presents a mixed picture. On the positive side industrial production during the year increased by 10 per cent (the first such increase in over a decade), compared to 2.8 per cent in 1974-75 and 6.1 per cent in 1975–76. While in 1975–76 industrial growth was mainly in electricity, coal, metallurgical, chemical and allied industries, in 1976-77 it was the maunfacturing industries,—transport equipment, chemicals and basic metal industries—that registered growth, the public sector units averaging a growth of 11 per cent, due in the main to better capacity use. Growth in the small scale sector was even higher (see Vol. VI p 642). Second as noted in the last issue (p 372), foreign trade registered a favourable balance, with exports increasing by 23.2 per cent at Rs. 4,980.6 crores and imports declining by 6.8 per cent to Rs. 4,908.2 crores, giving a trade surplus of Rs. 72.4 crores compared to the previous year's Rs. 1,222.4 crores deficit. Third net inward receipt rose by Rs. 1,371.3 crores compared to the previous year's Rs. 881.2 crores, so that at March 31, 1977 the country's foreign exchange reserves stood at Rs. 2,863 crores, after the IMF repayment of Rs. 303 crores. Fourth the buffer stock built up during the previous year of 18 million tonnes is a resource to deal with the oilments of the economy. Fifth gross domestic savings in 1975–76 were 19.4 per cent of GNP compared to 17.5 per cent in 1974–75. Domestic capital formation also increased from 19.1 per cent of GNP in 1974–75 to 20.8 per cent in 1975–76. The estimates for 1976–77, the report states, for both domestic saving and capital formation are likely to be of the same order as those for 1976–77. On the negative side, the report begins by noting the low rate of increase of GNP which was 2 per cent in 1976–77 compared to the previous year's 8.5 per cent. Second this in turn was largely due to the decline in agricultural production from 120.8 million tonnes in 1975–76 to 111 million tonnes in 1976–77, with stagnation in cotton output and a serious fall in edible oils production. Agricultural production declined thus by 5–6 per cent. The report points to the disturbing fact that Indian Agriculture continues to be dominated by the weather factor (as against the investment induced growth referred to by the RBI in its annual report), calling for giving higher priority to investments to bring more land under irrigation, water management, and the adequate supply of HYV seeds, fertilisers, pesticides, improved technology and credit to the farmers. A third negative factor is the 11.6 per cent rise which occurred during the year, due in the main

to rise in the prices of food items and industrial raw materials. The rise in the prices of gur, groundnuts, groundnut oil *and raw cotton accounted for half of the* total rise. Also in the latter part of the year, the prices of the pulses rose sharply. Inflation was fed by the erratic monsoon, the expectation of a lower groundnut and cotton crop and the increase in money supply. And that is the fourth factor,—that money supply in 1976-77 increased by 17.1 per cent. Here it should be noted that while money supply defined conventionally to include currency with the public and the commercial banks' demand deposit increased during the year by *Rs. 2,400 crores, the foreign exchange* reserves increase was over Rs. 1,500 crores at a time when the country had a favourable balance of trade. Also to be noted is that over Rs. 2,000 crores was expanded in financing buffer stocks, and non-food credit recorded an increase of Rs. 1,667 crores which was an increase of Rs. 1,140 crores over that of the previous year. There is need to use both instruments—the foodgrains buffer and the foreign exchange reserve—as anti-inflationary instruments and in the process generate employment. Fifth unemployment increased during the year and in absolete numbers reached menacing proportions. While employment in the organised sector increased by 2.6 per cent in 1975-76, that is by 5.20 lakhs, due to the 4.7 lakh increase in employment in the public sector, the number of job-seekers on the live registers in the employment exchanges increased by 4.8 per cent to 9.77 million at December 31, 1976. The total number registered educated unemployed increased from 4.8 million in 1975 to 5.1 million in 1976. Other highlights of the Economy survey are the increased annual plan outlay which was increased by 31.3 per cent to Rs. 7,852 crores in 1976-77, with increase on agricultural outlay by 35 per cent and that on minerals and industry by 33 per cent. The combined outlays of the Union and States were 5.5 per cent higher at Rs. 10,860 crores, but while non-developmental outlays increased by 7.1 per cent, developmental outlays increased only by 4.4 per cent. The report calls attention to the fact that the current revenues of the States are not rising fast because of a decline in the share of Central taxes and a lower growth of State's revenues, the receipts from non-tax revenues showing a downward trend because of the losses incurred by departmentally run State units. In this connection the increasing overdrafts of some of the States, is a matter of serious concern (see last issue p 372). The report refers to the good effort made by the States at resource mobilisation during 1974-75, but calls attention to the large relatively under-taxed sectors and the concessions announced on the eve of the June elections by several States in sales tax, professional tax, property tax and land revenue. This slack in resource mobilisation must now be made up. Also the improvement in the financial results of Union government undertakings witnessed in 1974-75 was not maintained in 1975-76. There is need for the financial returns of the units to be improved. *As far as external assistance* is concerned in 1976-77, the gross inflow declined from Rs. 1,839 crores to Rs. 1,747 crores, and the net inflow (net of debt) from Rs. 1,153 crores to Rs. 986 crores, though the conditions of the loans have softened and improved. The policies to be pursued during the current year in the Plan budget with regard to price stability, agricultural growth, saving and investment and export production thus clearly stand out in this survey. That is, the Economic Survey lays the ground work for the

year's budget and the Annual and Sixth Plans dealing with the following issues; (a) pushing forward the overall growth rate which depends primarily on the performance of agriculture particularly rice, pulses, vegetable and seeds, cotton and animal husbandry: (b) countering the uneven distribution of the results of growth whereby 1/3 of our districts record no or nagative growth: (c) dealing with the growth in numbers living in poverty: (d) attacking the problem of growing unemployment and under employment: (e) ensuring price stability: (f) ensuring continuing increase in exports. These conclusions are supported by a World Bank survey of the Indian Economy released in June. Its major conclusion is that long term growth in both agriculture and industry has been unsatisfactory. Agricultural output has hardly kept pace with population growth, its fluctuations have caused problems of foodgrains supply and balance of payments and its slow growth have affected all sectors of the economy. Industrial growth has been around 3 per cent over the past decade due to shortages in supply of necessary inputs and imported raw materials, the rigidities of the licencing system and trade policy. There are also structural imbalance between capacity creation and income generation, misallocation of investments in the past and political uncertainties. The report points out that agricultural investment can be increased by accelerating the growth of irrigation through the opening up of untapped irrigation potential, the acceleration of ongoing construction and the modernisation of irrigation projects. Also accelerated rural electrification will promote expansion of ground water irrigation, as will higher levels of funding of agricultural programmes, provided agrarian reforms are effectively carried out. Particularly such investments and expenditures should be geared to increase the incomes of small farmers for productivity reasons—they hold 25 per cent of the cultivated land—and for welfare reasons—they are 70 per cent of the rural population and constitute the majority of those living below the poverty line. Many small farmers have adopted HYV seeds and the new technology, have gone in for intensive farming, so that general programmes of extension services, ground water development, and command area development aimed at them will have a high pay off. On the industrial front, the 1975–77 record is good and its continued growth will depend on increased public and private sector efficiency, capacity expansion and growth of markets for industrial products. A faster growth of agriculture will be reinforcing industrial growth by providing wage goods for industrial labour and generating demand for industrial products. While there is a time lag between agricultural growth being translated into growth in industrial demand, higher investments, particularly public sector investments, can generate the desired increase in the demand for industrial goods, capital goods and through the employment effect, final consumption goods. Similarly investments in agricultural infrastructure—power and transportation—can also create industrial demand, increasing productivity and contribute to long term growth.

Union Budget 1977-78: The revised Union Budget for 1977–78 presented to the Lok Sabha in June by the new government in accordance with the indications of the interim budget presented in April (see Vol. VII pp 280–281) set itself the following short and medium term objectives, flowing from the analysis of the economy summarised in the earlier section. These objectives are: (a) accele-

rated agricultural productivity for the removal of poverty, increasing employment, stabilising prices of essential goods and expanding the market for manufacture: (b) doubling irrigation development from the current annual 2 million hectares and developing the ancillary activities of poultry, dairy farming, fisheries and forestry: (c) increasing investment in rural infrastructure of rural roads, marketing, drinking water etc: (d) promoting area centred programme of integrated rural development: (e) ensuring industrial growth through a larger proportion of its capital investment coming from its own internal resources, emphasising fertilisers, pesticides, power, cement, and petroleum, ensuring effective and rational price policies, cost consciousness and fuller use of capacity and reducing the lead time in launching industries which otherwise is doubling the capital cost: (f) encouraging efficient units to take over sick ones: (g) promoting faster development of power: (h) building more capacity, know-how and marketing in the export sector: (i) giving small scale industry further encouragement along with a scheme for the educated unemployed: (j) increasing the saving and investment rate from the present 12–15 per cent of GNP to nearer the 30 per cent of GNP of the other industrialised countries: (k) cutting back on conspicuous conception and moving towards a more egalitarian one: and (l) using monetary and credit controls and the stocks of foodgrains and sugar and importing oils and fibre to stabilise prices. The budget presented showed under Revenue account receipts of Rs. 9,554 crores and expenditure of Rs. 9,487 crores, resulting in a revenue surplus of Rs. 67 crores, and under capital account Rs. 5,942 crores as revenue and Rs. 6,081 crores as expenditures, involving a capital deficit of Rs. 139 crores, with an overall deficit of Rs. 72 crores, in place of the overall deficit of Rs. 632 crores of the interim budget (see Vol. VII p 281) and the overall 1976–77 revised budget deficit of Rs. 325 crores. The reduction in the overall deficit which has been one of the declared aims of the new government is in part due to increased tax revenue (Rs. 130 crores), in part to some reductions in the estimated expenditures of interim budget (Rs. 50 crores in defence and Rs. 130 crores on non-plan expenditures) and in part due to estimates of higher revenue and capital receipts. The drawing down of Rs. 800 crores from our foreign exchanges reserves proposed in the interim budget to finance the proposed budget remains unchanged. The taxation and incentive proposals which in total will yield an additional Rs. 130 crores this year are: (a) raising income tax exemption limit from Rs. 8,000 to Rs. 10,000 and increasing the income tax surcharge from 10 to 15 per cent, which will push up the maximum marginal rate of income tax from 66 to 69 per cent: (b) increase in wealth tax rate by 0.5 per cent for slabs above Rs. 2.5 lakhs and to 3.5 per cent for those above Rs. 15 lakhs: (c) continuing the compulsory deposit scheme for income tax payers for 2 more years: (d) investment allowance of 35 per cent on machinery and plant installed for manufacturers using indigenous technology: (e) exemptions for closely held industrial campanies from compulsory distribution of dividend: (f) extension of capital gains tax exemption to all assets, provided investment of the gains is made in company shares, bank deposits and UTI: (g) preferenrial tax treatment to industries set up in rural areas and exemption from tax of expenditures by companies on rural development and dividends below Rs. 250: (h) incentives to voluntary amalgamations of sick units

with sound ones: (i) increase in tax coverage of incomes earned by Indians abroad: (j) 10 per cent increase in excise duty on watches and 12 per cent increase on acetylene gas and electric fitting: (k) increased duties on cigarettes and bidis and cars and two wheelers and three wheelers: (l) exemption from the one per cent excise to medium as well as small newspapers, while the general excise on miscellaneous commodities is raised from one per cent to two per cent: (m) reduction in excise duty on newsprint and pumpsets and excise relief to handloom and power loom, graded excise reductions on paper produced by small mills and TV sets: (n) concessions to preserve forests and matches produced by co-operatives: (o) rationalisation of excise or customs duty on radios, transistors, sterios, woolen yarns, watches (which are to be imported by HMT), textile fabrics and copper coin and bars: (p) market loans will yield Rs. 1,000 crores compared to last year's Rs. 849 crores: (q) Rs. 800 crores will be drawn from the foreign exchange reserves: and (r) net external assistance after repayments of interest and capital is estimated at Rs. 1,052 crores—making up a grand total of receipts of Rs. 15,366 crores. The expenditure proposals relates in the main to the Annual Plan which proposes a total outlay of Rs. 9,960 crores (against Rs. 7,852 crores in 1976–77), an increase of Rs. 27 per cent. Rs. 3,978 crores is provided for the Union Plan in the budget which increases to Rs. 4,939 crores when the public undertakings resources are taken into account. Union assistance to the States Plans in the budget amounts to Rs. 1,812 crores. In the next issue of the Bulletin, the sectoral breakdown of the Annual Plan will be given. The major proposals in budget outlay are: (a) on the rural sector which includes agriculture and allied services, irrigation, co-operation, fertilisers and that part of power attributed to the rural sector Rs. 3,024 crores are allotted, constituting 30.4 of the Plan outlay. This includes Rs. 100 crores advance plan assistance for irrigation to States, Rs. 260 crores from ARC for minor irrigation and Rs. 175 crores for rural electrification: (b) Rs. 20 crores are provided for rural roads: (c) an additional Rs. 40 crores are for drinking water in rural areas: (d) Rs. 234 crores for power development (including Rs. 5 crores for Neyveli for a 200 MW power plant) in addition to the States Plans provision of Rs. 1,676 crores: (e) Rs. 677 crores for energy of which Rs. 451 crores are for ONGC, to ensure domestic production of 11.31 million tonnes of crude compared to Rs. 8.89 million tonnes in 1976–77: (f) Rs. 511 crores for steel, allowing for the rephasing of the expansion of Bhilai and Bokaro: (g) Rs. 651 crores for transport and communications, including Rs. 302 crores for Railways: (h) Rs. 35 crores for khadi and village industries: and (i) Rs. 20 crores for handlooms and Rs. 4 crores for sericulture. In a popularised presentation of the Budget it is pointed out that on the expenditure side, out of every one rupee, 37 paise is spent on the Plan, 20 paise on other development expenditure, 18 paise on defence, 10 paise on interest payment, 6 paise on transfers to States and Union expenditure and 9 paise on other expenditures. On the other hand out of every one rupee collected as revenue, 23 paise will come from excise, 15 paise from non-tax revenue, 12 paise from loan recoveries, 11 paise from customs, 11 paise from market loans, 10 paise other receipts, 8 paise corporation tax, 6 paise from external loans and 2 paise each from income tax and other taxes. The budget is essentially a transition measure from the past government to the new one. There is a great deal of continuity in it,

with a little more emphasis on the rural sector. The extent to which small and medium manufacturers are encouraged to expand and produce more, the amount of employment that will be generated and its success in promoting saving and investments will depend on the extent to which the budget instrumentality is supplemented by policy and programme measures that will carry out the objectives enumerated at the start. Parallel to the Jha Committee on indirect taxation established as a consequence of considerations set forth in the last budget (see Vol VI p 194) the government has set up a direct taxation committee headed by Mr. N. A. Palkiwala (a) to simplify and rationalise income tax, sur tax, wealth tax, gift tax and estate duty laws, (b) to suggest ways of improving and simplifying their administration and (c) consolidate the laws into a single Act if feasible and prepare drafts thereon. The Committee is requested to present its report by December 31.

Railway Budget: The final railway budget for 1977-78 presented to the Lok Sabha in June estimates gross traffic receipts at Rs. 2,110.24 crores which is Rs. 23 crores above the revised receipts estimates for 1976-77 and about Rs. 9 crores above the interim budget presented in April (see Vol. VII p 282), as the target of originating revenue earning loading has been raised from 217 million tonnes in the interim budget to 220 million tonnes. The working expenses at Rs. 1,648.74 crores are up by Rs. 13 crores compared to the interim budget to provide for the higher traffic target. The other items of outgo namely, depreciation reserve, pension and miscellaneous are unchanged so that total outgo is Rs. 1,852.42 crores, the net revenue is Rs. 257.82 crores (up by Rs. 5 crores over the interim budget), the dividend to general revenues is Rs. 225.32 crores, with an increase in the estimated net surplus of Rs. 32.50 crores (as against Rs. 26.45 crores in the interim budget). The net surplus in the revised budget for 1976-77 is Rs. 35.67 crores against the budget estimate of Rs. 9.98 crores. Hence no increase in fare and freight is proposed and an expert committee is to be appointed to review the whole railway fare and freight structure. The surplus for the two years means that indebtedness of the railways to the general revenues on 31 March 1978 will be Rs. 440 crores against Rs. 477.18 forecast in the interim budget. The budget provides for: (a) more basic amenities to long distance passengers, (b) reduction in platform tickets from 50 paise to 30 paise, (c) guage conversion schemes of 2,500 KM, (d) the plan provision of Rs. 482.80 crores during 1977-78, a reduction of Rs. 21 crores from the interim budget but including Rs. 10 crores for the metropolitan transport projects at Bombay, Calcutta, Delhi and Madras and (e) Rs. 2.80 crores to meet the working capital requirements for export orders in the Chittaranjan Loco Works. In addition to the 25 new lines which are now underway and are provided for in the budget, three new lines are provided for the exploitation of the mineral resources of the country. These include the restoration of the Pamban-Dhanushkodi line and speeding up the construction of Tirunelveli-Trivandrum-Kanyakumari line in this State and Kerala. It is a good budget, and the surpluses emerge from the relatively sound working of the railways during the last 2 years. The problem facing the railways is the social demand to open up the backward areas of the country by providing them with railway links and the economic problem of these not being a paying proposition and adding to the over Rs. 440 crores

indebtedness of the railways. The reconciliation of this opposing situation is not only a matter of transportation economics but in the end is a policy decision.

Seventh Finance Commission : On June 24, the Union government announced the establishment of the Seventh Finance Commission with Mr. Shelat as Chairman and Raj Krishna, C. N. Hanumantha Rao, H. N. Ray and V. B. Easwaran as members, in accordance with Article 28 (3) clauses A and B of the Constitution to make recommendations and the financial awards for the Sixth Plan, which will run from 1979–80 to 1983–84. The Commission's basic terms of reference are similar to that of the Sixth Commission (see Vol. II No. 8 pp 5 and 6). It must make recommendations on (a) distribution of the processes of the income tax and excise duties between the Union and the State, (b) the principles which will govern the grants in aid to the States out of the consolidated fund of India, (c) non–Plan capital gap of the States for the five year period, the State's debt position particularly the loans advanced by the Union and outstanding at March 31, 1979 and (d) the financing of relief expenditures by States effected by natural calamities, suggesting modifications of existing arrangements as appropriate. In addition the Seventh Commission in its recommendations is asked to take into account (a) the requirements of the backward States to bring the level of their general administration and non–developmental sectors and services to the level of the more advanced States during the period ending 1983–84 (unlike the Sixth Commission where criteria was to bring them to the level of the All India average), (b) the scope for better fiscal management, and economy in expenditure of the States, (c) the need to ensure reasonable returns on investment in irrigation, power projects, transport undertaking and other industrial and commercial enterprises, (d) the changes in the principles governing distribution among the States of the proceeds of estate duty, additional excise duties in place of sales taxes by States on cotton fabrics, woolen fabrics, sugar and tobacco and (e) the grant in aid to be made to the States in lieu of the tax on railway passenger fares and from the wealth tax on agricultural property. The Commission has wide terms of reference and it is hoped that it can take a real step forward in equating the resources of the States with their development functions and lessen their dependence on the Union government and Planning Commission for various forms of aid, assistance and hand outs and in rationalising the tax structure, particularly the varying rates of sales tax. The Commission should also strike a balance between giving special consideration to backward States and providing an incentive to States to mobilise more effectively State resources. In this regard the somewhat irresponsible fiscal concessions granted by some of the backward States on the eve of the recent elections must first be corrected before their real backwardness factors are assessed. The Commission's report is required to be submitted by October 31, 1978, in time for the formulation of the Sixth Plan and the budget for 1979–80.

Prices and Anti-inflation : The price rise slowed during the month, the wholesale price index standing at 186.9 on May 28 and 187.6 on June 4. While in April, the price rise was 1.9 per cent, that for May was 1.1 per cent. The main increase was in primary commodities 1.3 per cent, with pulses rising by 5.8 per cent, oil seeds by 4.6 per cent, and petroleum by 7.6 per cent. Among manufacture

products the price rise slowed, edible oils rising by 3.5 per cent (against 6.4 per cent in April) and sugar 2.7 per cent. Over a 12 month period, the price rise was 10.7 per cent, and since the new government took office at the end of March it was 3 per cent. One reason for the price rise was as noted earlier the increase in money supply with the public which increased by Rs. 2,196 crores for the year ending June 3, 1977, whereas for all of 1975 it was Rs. 1,103 crores in 1975. Currency with the public increased by Rs. 992 crores compared to the 1975 increase of Rs. 254 crores. Aggregate monetary resources increased very sharply by Rs. 4,758 crores for the 12 month period ending June 3. The major expansions were bank credit to the government and commercial sector which for the year increased by 14.2 and 17.7 per cent respectively. The government has been disturbed at this continued price rise and took a series of anti-inflationary measures. It issued in early June instructions to all ministries and departments of government and public undertakings to: (a) make staff reductions of 10 per cent, (b) cut down travel and overtime allowance, (c) restrict use of staff cars, telephones and contingencies, (d) reduce new constructions and (e) review and cut back on current functions and regulatory activities of the ministries—committees, commissions etc, which have become redundant. The CD scheme for income tax payers is to be continued for 2 more years, and the second instalment of the impounded CD of workers will receive a higher interest in the provident fund. (It looks, however, as if the third instalment of CD will have to be paid in cash in July 1976). The government also announced in addition to the 2.4 lakh fair price ration shops (54,000 in urban and 1.86 lakhs in rural areas), the opening of 1,000 Janata shops to sell essential commodities to the poor at reasonable prices These shops will be located in slums, and colonies of the poor workers. Also the preventive measures against smuggling have been strengthened by the customs staff and enforcement agencies. One evidence of this, the government points out, is the continuing increase in inward remittances (in April 1977 it was Rs. 145 crores, in April 1976 it was Rs. 110 crores) and the strength of the Indian Rupee in markets abroad. Further in response to the appeal of the government, all the leading business houses met on May 31 and decided on a voluntary price freeze until the end of the year. The increase in the cost of inputs, including raw materials is to be absorbed by the firms. There are two escape clauses—one is that this price freeze will not apply to loss making units and the other is the case where input costs rise sharply. This decision was followed by all industrial units including small manufacturers who are joined in the Federation of the Association of Small Industries of India. A similar move is needed by those engaged in trade and commerce. The Union government constituted a committee headed by Prof. Neelkanth Rath of the Gokhale Institute with a number of Trade Union leaders to examine the composition of the consumers prices index and make recommendations to ensure its accuracy. On June 20, three Union government loans for an aggregate amount of Rs. 400 crores were opened for subscriptions and closed on the same day as they were fully subscribed. This is the first instalment of the Union loans in the current year, for which the budget makes a provision for aggregate market borrowings of Rs. 1,000 crores.

Industry and Public Sector Performance: A survey in the Economic Times in early June reports that the private

corporate industrial sector is not in good shape. In 1976–77, 56 per cent of the companies did not declare a dividend as against an increased dividend declared by 54 per cent of the units in 1975–76. Only 19 per cent of the 724 units which did declare a dividend in 1976–77 raised the dividend rate. Taking those who did not and those which lowered the dividend, 65 per cent or nearly 2/3 of the 724 companies were in this bad position. The Department of Heavy industry, on the other hand, reports continuing improved production by 16 units under its purview–amounting to Rs. 40.13 crores in May as against Rs. 33.46 crores in April. The total output of BHEL was Rs. 22.88 crores. With the commissioning of the Central Foundry Forge Plant in August 1976, it has been able to save Rs. 19 crores in foreign exchange. It meets the castings and forging needs of BHEL and also caters to the needs of nuclear, ship building, steel and allied industries. On the other hand late June reports from HEC, Ranchi, show a steep fall in production due to industrial strikes and chaos. Against the month's target of Rs. 675 lakhs, production in April was Rs. 80 lakhs and in May Rs. 123.47 lakhs. From April 15 to May 31 there were 30 gheraos of the management. The disputes should be settled quickly as not only internal production but export orders are in danger of being affected. The Chittaranjan Locomotive Factory reports a successful diversification programme, which includes repower packing of imported diesel locos, with CLW produced engines and equipment and CLW electric engines which are cheaper than imported ones. Its programmes of modernisation and diversification is to be assisted by a World Bank credit.

National Production Front :

Steel : Rourkela reports achieving its May target for both production and despatch of saleable steel at 1,00,746 tonnes, which was 108 per cent of the target. Its production of CAN fertilisers has also been above target. Bokaro also reports production in May exceeding its capacity at 1,54,572 tonnes of hot metal 71,550 tonnes of hot rolled coils and 30,840 tonnes of hot rolled sheets and plates. It fulfilled its export commitments to 18 countries around the world. The government has decided that the Bokaro expansion will be carried out by Indian consultants and firms and not through foreign collaboration. The plant is now being readied for producing 4.75 million tonnes and will be expanded to 10 million tonnes. Its cold rolling mill complex was commissioned on June 19 to complete the first stage of its 1.7 million tonnes of its target of 4.75 million tonnes referred to earlier. In inter–Country terms, our steel industry is doing well. In 1976 it emerged as the 9th largest producer, registering at 21 percent the second highest growth rate, due mainly to capacity use. Rourkela and Durgapur increased their production by 11 percent over the previous year, Bhilai at 8 million tonnes, their sales increased by 1.6 million tonnes over that of 1975–76. SAIL reports that the demand for steel is picking up within the country and domestic sales will be equal to the production this year from the integrated plants of 7.4 million tonnes. To this should be added one million tonnes from the arc furnaces, 2,50,000 tonnes from imports and 1.6 million tonnes from carry–over stocks. Of the 7.4 million tonnes that will be sold this year, 4.2 million tonnes will be from the public sector and 2.6 million tonnes for exports. This increase of domestic sales is also due to the diversification of the produc–

tion of the plants to meet the varied demand domestically and ready availability of all categories of steel. There is no waiting period and no black marketing in steel. But the steel plants report shortage of internal funds and need budget support. Rourkela which will make Rs. 30 crores profit has no funds after paying the corporation tax and its interest and loan payments. So too Bhilai which will be making a profit of Rs. 31 crores will have no funds after paying Rs. 11.7 crores in corporation tax and Rs. 36.5 crores for loan and interest repayments. And there is also their plan needs; Bhilai needing Rs. 140 crores for this year, and the large resources needed by Bokaro. The two plants have had to accept cuts of Rs. 15 crores in the case of Bhilai and Rs. 5 crores for Bokaro. Bokaro, because it does not pay taxes and loan and interest payments, is able to generate its own resources of upto Rs. 42.3 crores for this year. Similarly even Durgapur is in the red to the extent of Rs. 16 crores, its alloy steel plant will be making a profit of Rs. 3.5 crores for this year. The development of the Southern steel plants will be referred to later under the State section.

Crude: Crude production and exploration were increasing and improving in May. In the month, Oil India increased its output to 3 million tonnes per annum, with increased supply of crude to Barauni Refinery at 3.3 million tonnes per annum against its rated capacity of 2.8 million tonnes. This was also in response to the oil crisis in the North Western region referred to in the last issue (see p 373). Between January and March, production was at a high 3.1 million tonnes per annum, which was still further stepped up in May as noted earlier. In June ONGC took steps to construct the fifth and largest production platform in Bombay High, incorporating the latest technology in offshore oil production at a cost of Rs. 240 crores. This will enable ONGC to attain the Bombay High target of 2.5 million tonnes for 1977–78, 4.75 million tonnes for 1978–79 and 6 million tonnes in 1979–80, after which it will increase by 2 million tonnes till it reaches the 10 million tonne target. It is now producing 35,000 barrels per day and is being increased to reach 80,000 barrels per day by the year's end. In 1976–77, indigenous crude production was 8.9 million tonnes, of which ONGC produced 5.76 million tonnes (5.35 million tonnes, onshore and 0.41 million tonnes offshore), Oil 3.08 million tonnes and AOC 0.06 million tonnes. For the current year, the indigenous production target is 11 million tonnes, the main increase being from Bombay High. The World Bank will be providing $ 150 million for the development of offshore oil fields at Bombay High and Bassein, to lay two submarine pipelines to transport oil and gas from the field to the uran store terminal. Uran is being developed to include a crude stabilisation and gas fractioning plant and the Nhava Sheva Port is being developed to supply vessels to dock and and the repair of drilling equipment. As noted in the last issue (pp. 373–374), the government is discussing the problems faced by the 2 companies—Carlsberg Natomas and Reading Bales—in the Bengal – Orissa and Kutch offshore areas so that they may rescue their operations. The Assmera group has identified several possible oil zones near Tuticorin. The Company has completed the seismic work over 26,000 sq. km., selected 5,000 km for intensive exploration and has retained 2 blocks in Palk Bay and the Gulf of Mannar. Drilling started in May in Mannar I–I, with the Tuticorin Port providing the back up shore support. ONGC in May announced the establish–

ment in October 1976 at Ahmedabad of an Institute of Reservoir Studies at a cost of Rs. 4.82 crores to increase and intensify its onshore and offshore exploration activity. The Institute is developing studies in reservoir technology for extracting more oil from the reserves. Onshore areas are estimated to contain 450 million tonnes of crude oil, of which 120 million tonnes can be recovered by known primary techniques. This is about 28 per cent of the reserves and an additional 14 per cent can be produced by modern and sophisticated techniques without additional investment on exploration. The Institute which caters to the needs of all oil fields is engaged in training its staff here and overseas and also has foreign experts at this formative stage. It is designing and supervising field pilot and tests and reservoir studies.

Iron-ore and Aluminium: The iron-ore target for this year has been increased to 17.7 million tonnes, despite MMTC not attaining last year's lower target of 13.5 million tonnes. This increase is justified (though it may not be fully attained) first because the port facilities at Haldia, Visakapatnam and Madras have been vastly improved and the international recession in the steel industry is lifting. Aluminium supply in the country will be increased with the commissioning in July of the second potline of 50,000 tonnes capacity of Bharat Aluminium. This will enable the domestic demand of 1.1 lakh tonnes to be met as well as the export target of 20,000 tonnes. it Is however essential that power supply to the industry be maintained at a constant level. To ensure this, the government announced in June its approval of captive power generating capacity in some of the aluminium producing units. To overcome the shortages in some of the non-ferrous metals, the import policy allows the import of such base materials in short supply. On this basis of the availability of raw materials, all manufacturers of alloys and other users of non-ferrous metals are encouraged to make firm production plans.

Edible Oils: As noted earlier, the action taken by the government to increase the supply of edible oil reported in the last issue p. 369, moderated its price in May. In June the government supplied cities with over 10 lakh population imported rape seed oils after refining at Rs. 8.50 per kg. through the public distribution net work. Also vanaspati units were advised to use imported oils upto 75 per cent and since March the groundnut oil by the vanaspati units had been banned. STC's stock of 60,000 tonnes of edibie oil is also available to keep down further price rises, Parallel action is being taken to increase the production of oil seeds.

Textiles and Cement: The Union government has announced that there will be no more take over of sick textile mills, nor will there be a return of nationalised mills to the original owners. Further an integrated national policy on textiles covering production in the mill sector, handlooms, power looms, man-made fibre units and the raw materials that go into these is being developed and will be announced soon. The budget gives some hints about these aspects of textiles policy and production. On the cement front, the government forecasts a serious short supply, with total production at 17 million tonnes this year against last year's 18.7 million tonnes. Production between January and March 1977 was good at 5 million tonnes (compared to the first 3 months of 4.7 million tonnes in 1976), output in April-June is low at 4 million tonnes. The current year's demand is

estimated at 25.9 million tonnes, involving a shortfall of 8.9 million tonnes. Hence the Union government has asked the State governments to give priority in power supply to cement units. This explains the barter deals between States like Kerala and Maharashtra which supply power in exchange for cement from Tamil Nadu and Karnataka. The main shortages are faced in Uttar Pradesh, Delhi, Punjab and Haryana and to meet this situation on a long term basis, 3 new plants are coming up in this area in the next 3 years which will produce an additional 2 million tonnes per annum.

Tyres and T.V. Sets: As part of the move to keep down price increases, Tyre companies decided in June not to proceed with the proposed 10 per cent increase in rayon tyres prices and 5 per cent rise in nylon tyres prices. In turn the government will be examining the prices of raw materials used by the tyre companies to maintain an equilibrium in this stabilisation agreement. Similarly the Electronics Trade and Technology Development Corporation has decided to reduce the price of TV tubes from Rs. 465 to Rs. 365, so that TV sets can be sold at the lower price. This lowered price should include the concessional excise duty of 5 per cent on TV sets of 20 inch screen size. This means that TV sets can sell at Rs. 1,400–Rs. 1,600 instead of the current price of Rs. 1,800.

Fertilisers: The Fertiliser Corporation of India reports that its installed capacity for Nitrogen is being doubled and for phosphatic fertilisers increased ten fold by December 1978. During the current year the Sindri rationalisation, Nangal expansion and Trombay IV Projects will be commissioned, increasing installed capacity from 9 lakh tonnes of nitrogen to 11.3 lakh tonnes and 36,000 tonnes of P 205 to 2.61 lakh tonnes. Next year, 1978–79, the two coal based plants at Talchar and Ramagundam and the Haldia and Sindri modernisation projects based on fuel oil will be commissioned, raising the total capacity to 1.8 million tonnes of nitrogen and 3.36 lakh tonnes of P 205. The Trombay V Project using Bombay High gas will be commissioned in 1980 and will produce 2.27 lakh tonnes of nitrogen per year. By the end of 1978–79, FCI will contribute 46 per cent of the country's demand for nitrogen and 27 per cent for that of P 205. To handle this increased production, FCI's marketing organisation is being updated and expanded.

Agricultural Production: As at June 2, the Union ministry of Agriculture reported that wheat procurement had crossed 3.2 million tonnes for the season. The daily procurement in Punjab was one lakh tonnes, its total being 2.1 million tonnes. Of this about 9 lakh tonnes were rain affected wheat, 1.5 lakh tonnes being procured by FCI and the rest by the State government and co-operative units. In fact official Procurement of wheat is concentrated in Haryana and Punjab where the crop is damaged, private trade concentrating on UP which has suffered little rain damage. With the monsoon advancing in June, the Agricultural ministry is putting into effect its plan to double the per hectare yield of paddy by advancing the time of sowing through the community nursery programme for which Rs. 90 lakhs have been allocated for this season and the cultivation of short duration HYV paddy, in UP, Bihar, West Bengal, MP, and Orissa. This paddy area which covers 45 per cent of all India paddy hectarage has a low yield because of the long duration (134 to 145 days) variety used by farmers. The rice crop, dependent in these areas on rain, needs

30 cm of water spread over 3 months within which the crop must be harvested to avoid the dangers of drought. While July and August provide the needed 30 cm, in September the rain fall declines sharply and the crop trends to wither. Hence the sowing time is being advanced through the community nursery programme and use of HYV seeds which are of 100–125 days duration. For HYV transplanted in June, the harvest will be over in August and for those transplanted in July, September will be the harvesting time. Then the farms can be prepared in time for rabi cultivation. In June, the Brahmaputra flood reports from Assam and West Bengal refer to widespread damage to paddy and jute crops, for which long term preventive measures must be taken. One problem that is faced this year is the low wheat offtake from the public distribution system. In 1976-77 the offtake was 7.5 million tonnes and for this year it was estimated that the offtake would be 9.56 million tonnes. In May, however, the offtake was only 5 lakh tonnes and in June even lower. The reason is that the open market prices and quality of wheat are much more attractive than that offered in the fair price shops. Hence the government is thinking of reducing the issue price of wheat by Rs. 10 per quintal, from Rs. 129 to Rs. 119 per quintal. The open market prices are Rs. 109 to Rs. 131 in Punjab, Rs. 100–148 in Haryana, Rs. 110–Rs. 125 in UP, Rs. 92-Rs. 147 in Rajasthan and Rs. 115–Rs. 180 in MP. The reduction in the price of the public distribution system will mean an increase in the budget subsidy by Rs. 60–Rs. 100 crores, because at the procurement price of Rs. 110, a cut in the issue price below Rs. 129 per quintal will not cover FCI overheads. But unless the offtake increases, the governments food stocks will keep increasing. Of the existing 18 million tonnes, only 12.5 million tonnes are in godowns. The rest in cover and plinth storage has faced one monsoon and with the second monsoon now will deteriorate further. One decision urgently needed is for the government act on the Juneja Committee recommendation to establish a storage capacity of 20 to 21 million tonnes, to provide a 12 million tonnes buffer and 3 to 5 million tonnes operational stock. In this situation it is good that agreement has been reached with the Soviet Union to return its wheat loan from the buffer. 5,00,000 tonnes have been returned in cash (Rs. 40.7 crores) and the remaining 1.5 million tonnes will be repaid in imported hard winter wheat which the Soviet Union wants, from September when the PL 480 ban on exporting wheat expires.

Exports: The export target for 1977–78 has been established by the Union ministry of Commerce at Rs. 5,750 crores, with a further prospect of Rs. 6,000 crores. The export policy for the current year in outline is as follows: (a) in traditional items (jute, textiles, tea and coffee) financial assistance will be provided to increase productivity through modernisation of the manufacturing process or increasing yield of their manufacturing; (b) in non–traditionals (engineering, chemical, iron and steel, garments and leather) inputs and balancing equipment will be provided to increase their production base and to producing according to international trade norms while meeting domestic demand: (c) in non-traditional agricultural based and non–industrials (marine products, handicrafts, oil cakes, processed fruits and vegetables, and meat) because of their high value added nature and high employment generation, exports and production will be maximised: (d) in mass consumption items, exports will be restricted to meet domestic demand and stabilise price: (e) in non–essentials there will be a sharp

increase in exports: and (f) in non-traditional agricultural products (handicrafts, deoiled rice bran, cashew) which have a good income/employment generation, production and export are to be maximised. Among good export performers, chemicals and pharmaceuticals earned Rs. 18 crores in May (Rs. 14.4 crores in May 1976). In terms of export regions, Indian exports to West Germany are rising: in 1976 they increased by 55 per cent, with cotton garments and hand-made goods leading and semi-finished iron products, steel pipes, paper and printing machines making their appearance for the first time. There is still an imbalance in our trade with Germany—with exports being Rs. 273.79 crores, being 0.34 per cent of total German imports and imports from Germany at Rs. 336.53 crores being 9.5 per cent of all Indian imports. With US, Indian exports are also increasing. In 1975-76 it was 389.58 crores, in 1976-77 an estimated Rs. 540 crores and in 1977-78 expected at Rs. 600 crores. The main items in Indian exports to US are jewellery, marine products, engineering products, leather manufactures, jute goods and handicrafts. The US government has decided that as at the end of June all quota restrictions on Indian handloom will be removed. This would liquidate the stock pile of cotton handlooms awaiting export orders. The restriction orders on it passed by the US in January 1976 (see Vol VI p 95) were lifted in view of GATT provisions.

Aid: IDA announced a credit of $ 23 million for the $ 46 million Periyar-Vaigai modernisation irrigation system as reported in the last issue (p 379).

International:

World Monetary Reform and CIEC: In June the major event in the field of world monetary reform and the New International Economic Order was the International Conference on Economic Co-operation in Paris in June. Before that meeting, Canada announced that it will increase its foreign aid in order to attain the 0.7 per cent of GNP target of ODA. The Conference on International Economic Co-operation attended by Ministers from 27 developed and developing countries met in Paris for a week ending June 2. Agreement was reached on 2 issues. First a Common Fund is to be created to help protect the supply and price of commodities established by UNCTAD a year ago (see Vol VI p. 87). The countries in the conference pledged themselves to secure a successful conclusion on this at the forthcoming resumed session of the UNCTAD negotiating conference on a Common Fund scheduled for November 1977 at plenipotentiary level. The Common Fund is intended to be a central source of financing for the system of buffer stocks and other arrangements to steady commodity prices, involving a transfer of resources of producing countries. Second the conference agreed upon a Special Action Programme to help some of the poorest countries to offset their heavy international debts. The Special Action Programme calls for the developed countries to set up a one billion dollar fund to help the poorest countries of Africa and Asia. US will contribute $ 375 million to the Fund and EEC countries $ 385 million. The other developed countries will contribute the rest. There was no agreement on other important areas—energy for the industrial countries, and debt of the developing countries. Also there was no agreement on structural changes in the

international economic system. The Conference and its achievements and non-achievements over the 3 years of its existence must be seen as one part of a long discussion and battle in the concerns of the developing countries for a juster international order being realised. The Paris Conference was important in defining the issues and making the developed countries see and understand the issues. The two points of agreement are important only as part of this process.

Law of the Sea Conference: The resumed session of the UN conference on the law of the sea ended in June without agreement. The compromise proposal which had been under discussion was a system of exploitation of the sea bed resources both by the "Enterprise" which would be the mining arm of the International Sea Bed Authority and private operators on an equal basis. An operator would survey an area and come forward with 2 mining sites, one to be reserved for the "Enterprise" and the other to be given in contract to a private operator. The developing countries were trying to build safeguards against exploitation by private interests, which, led by the US, the developed countries rejected on the grounds that it would lead to non-exploitation of the resources. India supported the formula and with Mexico proposed that ISBA be given discretion to impose such conditions as it deems necessary for mining the sites. This agreement could be for a 20 year period to be reviewed by a conference at that time. The conference will have to meet again after this formula is further studied and negotiated as between the two groups of countries.

World Food Council: The Third ministerial conference of the World Food Council met for 5 days from June 20 at Manila. At the Council, the World's principal food producing countries agreed to set up an international grain reserve to stave off famine and prevent wild fluctuations in grain prices. The US offered to contribute 25 million tonnes of foodgrain to the Reserve. The Council set an annual target of half a million tonnes and the US, Canada and Australia pledged 2,40,000 tonnes for this year. At the conference there was a call for a rice reserve, which could not be discussed and which would be considered later at a special conference on rise.

OPEC: Towards the end of June, 11 members of OPEC announced that they have frozen plans to increase oil prices on July 1, Saudi Arabia and UAE on the other hand announced that they would raise their price of crude by 5 per cent from July 1. This means that from July 1 there will be a single price system These 11 countries will not raise their prices further by 5 per cent from July 1, as they had decided in December 1976 (see Vol. VII p 82). And Saudi Arabia and UAE by increasing their price by 5 per cent will come into line with all OPEC countries.

OECD Growth and Employment: A meeting of the Finance ministers of the 24 OECD countries meeting in June in Paris decided that in order to reverse the rising trend of unemployment in their countries, they would aid at an average over all growth rate of 5 per cent. Unemployment in their countries is reaching 16 million workers, 40 per cent of whom are in the age-group 16–24. On trade, the decision was to refrain from imposing new restrictions—continuing the trade pledge introduced during the oil crisis of 1974. The most important decision was to move forward on growth—the 5 per cent decision should be compared with current performance which is hardly 4 per cent.

II Agricultural Development

Paddy and Other Crops:

The Thanjavur and Tirunelveli districts paddy cultivation will be benefited from the modernisation and extension of the Periyar–Vaigai irrigation system referred to earlier. Water saving will be used to introduce double irrigation and to bring new areas presently rainfed under irrigation for the first time. When fully developed the increase in paddy production will be 60,000 tonnes, resulting in Rs. 11.70 crores in value added to the districts economy, a saving of Rs. 8.64 crores in foreign exchange and generating 20,000 man years of agricultural employment. The Mettur reservoir on which agricultural operations in the Thanjavur district depend is slowly filling. The monsoon had not advanced to the catchment area by early June. From the rains, the inflow was 2,300 cusecs and the outflow 1,000 cusecs. On June 23, the water level was 55.1 feet against the full level of 120 feet. Water will be released for agricultural operations sometime in July. On the other hand farmers inTiruchi districts are awaiting the rains anxiously to start farming operations. The Cauvery freshes are awaited, which occur when the monsoon is in full swing, to commence farming. Fertiliser offtake is reported to be poor in the State and in the South generally, with 4.2 lakh tonnes still remaining to be cleared. On the storage of grain, as noted earlier, FCI is building 60 lakh tonnes of godown space and on the advice of a technical committee is using double polythene covers and building the open air stocks on an inverted V shape. A programme has been launched in Coimbatore district to increase the area and production of groundnuts. In view of the failure of the 1976–77 unirrigated groundnut crop to the extent of 60 per cent, the intensive programme in rabi 1977 will bring more areas under irrigated groundnuts in lower Bhavani areas of Gobi and Erode divisions. The farmers have responded well and more than 2 lakh acres using HYV were brought under cultivation, boosting yielding to 700 to 800 kg. of groundnut per acre. This was double the area and output which total 1.4 lakh tonnes. The programme was supported by pest control measures and adequate credit facilities. A special scheme to increase the production of rooted cuttings of the HYV of pepper, Panniyur I, is being taken up in this State and other Southern States. Similarly production and distribution of 5 lakh cloves and nutmeg seedlings at subsidised rates are under way in the State and in neighbouring Kerala and Karnataka. On the other hand farmers are being advised to grow no more arecanut because the country is self–sufficient in this crop, and there is no scope of exporting it or using it for alternative purposes. The available land can be used to grow cocoa or coconut which are in growing demand ana for which there is a booming market.

Research Results:

Research on the foliar spraying of groundnut by the Tamil Nadu Agricultural University shows an increase in groundnut pod yields by 40 per cent. The sprays were carried out on the 40th and 60th days after sowing, using 40 ppm concentration. Half of that increased the number and the full amount increase the nitrogen content, shelling per cent and oil content. Research on chilli has resulted in an improved variety that resistant to

leaf curl and mosaic. Only 3.78 per cent are affected by diseases, but they grow well both in the plains and on the hills, yielding 55 to 91 quintals per hectare—the variety being Pant C-1. The plants are tolerant to water stagnation for 48 hours and should be tried extensively in this State. Another area where research results from the US needs to be adapted in this country and the State relates to the use of pesticides to solve problems of misuse, use on the wrong crops and wrong pesticides, and incorrect dosage, which involve considerable danger to life. Correct methods are now available and can be disseminated among farmers for control of insects, nematodes, weeds, birds etc. and diseases such as bacteria, fungi, chemical pollution and excesses and lacks of mineral nutrients. Such practices will increase food productions, while ensuring safety for human and animal consumption of the produce.

Dairy Farming :

With the added emphasis being given this year to Dairy farming as a provider of supplementary employment to small and marginal farmers and agricultural labourers, the need to reduce the unproductive dry periods of the upgraded cross bed dairy cattle and artificial insemination techniques become important. Here again the methods that have been developed in the UK for testing cattle pregnancy through testing milk samples from the inseminated animals can avoid the dangers of injection and using the blood sample method. These practices can now be adapted to the cross breed cattle in this State as a means of increasing milk production.

Fish Farming :

As noted in the last issue (p 384), the Central Marine Fisheries Research Institute at Kovalam has successfully completed its research on fish breeding and as a result has begun spawning under controlled laboratory conditions two export worthy fish species—the Indian white prawn and the spiny lobster. This first breeding of these two varieties along the east coast will now lead to their intensive culture all along the State's coast of 1,000 km. In 1976, 10,000 tonnes of prawns and 630 tonnes of lobster was the catch. With nearly 46,570 hectares of estuarine and brackish waters in the State, the massive culture of prawns, lobsters, mussels and oysters should be taken in hand forthwith. The laboratory and yard experiments now in progress at Kovalam are mainly oriented towards intensive culture of internationally marketable prawns by breeding spawners collected from the sea and raising of larvae produced from these and surf regions. The State Department of Fisheries is developing a number of pilot projects for the culture of mussels on ropes, of lobster hatched in the laboratory and young lobsters which cling to suspended objects in inshore waters in large tanks. To some extent this qualitative fish farming will make up for the limited quantities still characteristic of the State fish production.

Tea :

UPASI reports that due to favourable weather conditions, tea production in the South and in the Country is increasing. In the South there is a 50 per cent increase. Between January and April end, 38.3 million kg. was produced in the South (an increase of 12 million kg. compared to the production of the first four months of 1976) and for the country, it was 70. 2 million kg. (an increase of 6 million kg. from the northern plantation). Increases are also reported in other tea producing countries—Sri Lanka by

3.8 million kg. to 47.2 million kg., Kenya by 9.5 million kg. to 22.4 million kg. and increases also in Bangla Desh and Malawi production. As a result international tea prices have fallen from Rs. 31.40 kg. in March to Rs. 17.83 kg. in May.

Coffee:

In 1976-77, 51,441 tonnes of coffee was exported, earning Rs. 150.83 crores. For the 1977-78 season, coffee production is estimated 1.02 lakh tonnes, which is an increase of 2,000 tonnes over the year's revised estimates. As at April 30, the receipts into the pool were 96,358 tonnes, with 14,435 tonnes of exports. Cofee prices which were Rs. 42,160 per tonne in March declined to Rs. 37,500 in April and to Rs. 30,640 in May. Accordingly the export duty which was fixed at Rs. 2,200 per quintal on April 26, (from Rs. 300 before November 1976 and Rs. 1,300 at that time) was reduced to Rs. 1,600 on May 18 and Rs. 1,100 on June 25. This will reduce export earnings and reduce the estimated Rs. 80 crores from the export duty.

Rubber:

Production of natural rubber in April and May 1977 was 22,800 tonnes—an increase of 6.56 per cent compared to the April-May 1976 production. During the two months, 2,103 tonnes were exported. Pending the notification of the revised rubber prices, the market price in April-May ranged between Rs. 620-625 per quintal.

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III Industrial Development

Salem Steel:

The Union budget for 1977-78, as noted earlier, provides Rs. 13.07 crores for the Salem Steel Plant for plant and equipment, civil works and enabling facilities and Rs. one crore each for the steel plants at Vijayanagar in Karnataka and Vishakapatnam in Andhra Pradesh, for payment of consultants, testing of raw-materials and building up infrastructure facilities at the sites. It will be recalled that the Salem's first phase—a cold rolling mills complex is costed at Rs. 127 crores. This sum will have to be provided in the budget for this year and next year. An expert team headed by the Managing Director of the Plant is to visit stainless steel factories in Italy, France, US and Japan to study their working and decide on the technology to be used in the Salem plant and to arrange for training of Indian engineers in these factories. On this basis it is estimated that a technical collaboration agreement for the plant will be concluded by October, global tenders for supply of major plant and machinery for the cold rolling mill complex floated in July, and the first products of the plant come on the market in 1981. In

order to avoid delay in the purchase of imported equipment DGTD has set up a technical committee to give clearance for such equipment after the necessary review and scrutiny. TNWDB is constructing the water supply for the plant at a cost of Rs. 3.5 crores. So far Rs. 15 crores have been spent on the project for the railway siding, road links, water and power supply and construction of heavy equipment stores and technical and electrical woskshops.

Surgical Instruments:

The Surgical Instruments Factory (SIF) is being developed back into viable production through collaboration between BHEL and IDPL under which the plant will be maintained by IDPL and BHEL will provide the load through 2 products–valves and fasteners produced by SIF. SIF is a mechanical engineering plant and will machine the valves produced at Tiruchy and takeover the manufacture from 1978. SIF will also produce 30 types of castings required by Scooters India for its 2 and 3 wheeler vehicles. SIF will reopen in July and will become a viable and profitable line with the management input provided by BHEL.

TIIC:

The Tamil Nadu Industrial Investment Corporation sanctioned Rs. 16.90 crores as loans in 1976–77 and plans to lend Rs. 25 crores for the current year. In April–May, the Corporation has sanctioned Rs.3.5 crores as loans. Last year's loans were smaller than those for 1975-76 (Rs. 18.53 crores) due primarily to smaller loans to road operators at Rs. 57 lakhs compared to the previous year's Rs. 2 crores, and hotels—Rs. 10 lakhs against the previous year's Rs. 72 lakhs. In the case of small scale industries there was an increase from 452 units receiving Rs. 6.33 crores in 1975–76 to 553 units receiving Rs. 7.41 crores. Overdues declined from 24.6 per cent in 1975–76 to 18.7 per cent in 1976-77 and the capital structure improved from Rs. 4 crores to Rs. 6.5 crores in 1976–77. This enabled the Corporation to get higher refinance facilities from IDBI from Rs. 5.45 crores to Rs. 10.03 crores in 1976–77. It plans to finance the purchase of generating sets by small and medium industries to meet the continuing power shortage in the State.

Sugar and Silk:

Sugar crushing in the State is about ended by the beginning of July. It is estimated that the production for this year will be 3.29 lakh tonnes from 38.68 lakhs of cane, compared to last year's 1.98 lakh tonnes from 21.6 lakh tonnes of cane. However the recovery rate in private factories this year was 8.26 per cent compared to last year's 9.14 per cent, which may in part be due to drought conditions in Coimbatore district this year. Of the 20 sugar factories in the State, a majority are likely to record losses due to this low recovery rate. The steep fall in the price of raw silk has affected the silk industry and farmers. The fall ranges from 20–25 per cent. The Union government has conveyed to the Central Silk Board its approval of a price stabilisation scheme. Action needs to be taken to arrest the downward trend now and operate the stabilisation scheme effectively.

Leather:

April leather exports at Rs.22.19 crores are lower than April 1976 leather exports of Rs.24.74 crores. This is not an indication of a trend as it relates to one month only. Exports of leather goods fell sharply from Rs. 88.27 lakhs in April 1976 to Rs. 46.20 lakhs in April 1977, as did wet blue

chrome exports which declined from Rs. 18.77 lakhs to Rs. 6.83 lakhs. Leather foot-wear exports declined in quantity to 6.47 lakh pairs from 7.59 lakh pairs but their value rose from Rs. 95.53 lakhs to Rs. 163.38 lakhs. It is expected that exports will pick up as have the industrial leather manufactures which have jumped from Rs. 2.67 lakhs to Rs. 27.18 crores and foot-wear from Rs. 5.38 lakhs to Rs. 66.05 lakhs. As noted in the last issue (p 380) a Rs. 60 lakhs common facility centre for production of finished leather is being set up in Vaniyambadi. This State aided project is being set up by the Vaniyambadi Leather and Servicing Industrial Co-operative Society on a co-operative basis to pool the raw material resources of semi-finished leather in the area to produce finished leather. It will service 60 small tanners who will contribute Rs. 2 lakhs, in addition to the State government's Rs. 2 lakhs of share capital, equity capital of Rs. 2 lakhs, TIIC loan of Rs. 30 lakhs and Rs. 5 lakhs from the Leather Development Fund of STC. The Centre has imported Rs. 28 lakhs worth of machinery from abroad. The Centre will also help in the marketing abroad of finished leather goods.

Private Company Reports:

The annual report of Madras Aluminium for 1976 shows an increased turnover by 150 per cent compared to 1975 and a tripling of its profile inspite of the buyers market in this area. The company exported 2,000 tonnes, as part of the 20,000 tonnes sold covering Rs. 15 crores. The expansion programme approved in 1972 has had to be accelerated to meet the growing aluminium demand. The continuing problem faced by this power intensive industry is the power reductions and cuts over the past 3 years, from which it is hoped it would be relieved for the coming year. The company is planning to switch from furnace oil to coal for its steam generation and is negotiating the purchase of extrusion press and rolling mills.

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IV. Education, Science and Health

Educational Reform:

A meeting of State Teachers Association at Coimbatore in June recommended changes in the syllabi of elementary schools to be undertaken by a group of elementary school teachers, the government Department of Education and educational experts. The revised text-books for standard III to X incorporating the new 10 year school curriculum and the modifications suggested by the Text-Book Committee (see Vol. VI p 463) are somewhat late in being available to the schools as they start the school year in June. The Tamil versions of the text

books are also somewhat delayed. The texts in Science, Mathematics, History and Geography for standards IX and X in Malayalam, Telugu and Urdu have been published and are now available to those schools. The government has relaxed admission rules for students from unorganised schools or after private study so that they can now be admitted into recognised schools upto standard VIII instead of only upto standard VII. which was the rule upto now. This will ensure a certain degree of flexibility and unity in the system. The government has also sanctioned the opening of 100 more English sections in various classes in high schools in response to the increasing demand of pupils for English medium at the high school stage and to reduce the class strength in such sections in the interest of better learning. Following the SSLC examination results published in May (see last issue p. 390), the government announces that 2,662 scheduled caste and tribe students who have secured 60 per cent and more marks are eligible for the ad hoc government grant of Rs. 100 to enable them to prosecute higher studies. At the national level, following the consultations about the restructuring of the 10 + 2 system undertaken by the Union Minister of education, a committee headed by the Vice-Chancellor of Gujarat University has been set up to (a) review the stage-wise and subject-wise objectives of the NCERT document, "the curriculum of the 10 year school" (see Vol V p. 542), (b) to scrutinise the NCERT syllabus and text-books, (c) to scrutinise and propose modifications in the scheme of studies and timetables proposed in the document, and (d) to review the present scheme of studies and the time allocation for various subjects to give the teacher time for experimentation, creative work, remedial instruction and to provide for the needs of the bright child for advanced studies. This means that the national consensus reached on the document concerning the 10 year school is now being reopened and reviewed. It should be completed as fast as possible in order that the national policy on the school system may be once more established on a firm basis. At the University level, June was the month of admission of the students to PUC, B.A., B.Sc., B.Com. and M.A.,M.Sc., M.Com. Selections of students for the courses are based on their academic records and in conformity with the various reservations for scheduled caste and tribe and backward community students and in private colleges in accordance with the linguistic and minority obligations. The Tamil medium courses are not attracting students and there are many vacancies in the quota in this stream. The problem of asking and receiving donations at the time of admissions continues to be a worrisome problem and both the government and the University have urged colleges to eschew this practice.

Adult Education:

The Union minister is in the process of constituting the National Board of Adult Education whose first task will be to prepare for launching a national adult literacy campaign on Gandhi Jayanti Day. A Union government committee on the Saraswathi Mahal Library met in the library in Thanjavur and after reviewing the working of the library and its needs has recommended for its functioning a recurring grant of Rs. 1.50 lakhs and a non-recurring grant of Rs. 7.50 lakhs for building and alterations for the remaining 2 years of the Fifth Plan. In addition the State government will continue to provide it with its maintenance grants and a recurring grant of Rs. 25,000 for publication of manuscripts as matching grants.

3 fellowships at the rate of Rs. 750 per month for two years each have also been recommended by the Committee. This Union government action will now ensure safeguarding and developing of this important library resource both for the State and Country.

Technical Education :

The Union government has set up a committee headed by Mr. M. S. Randhawa to review the programme of agricultural universities to help them develop programmes which will enable their graduates to work on farms and to develop science programmes to be used in rural development. These programmes will establish a rural balance sheet on the assets and liabilities of each village and a malady remedy analysis to identify the constraints affecting the life and earning capacity of the people. A rural science corps consisting of young professionals and volunteers to work in the field of rural development for two or three years will be organised by Universities and industrial units to run a training centre aud resource backup agency. The Tamil Nadu Agricultural University's new Fisheries college near Tuticorin is off to a good start. The admissions will be from among over 1,000 applicants. The college has fifty acres of land at Korampallam, fish ponds have been built to teach inland fishing, and the building will be ready to start work in August. The government began the long drawn out admission procedure for engineering and medical college students in late June. In view of the decision not to hold selection examinations for these courses admission, the system of interview is in operation. The government is emphasising the importance of marks and the academic record in the process. In Karnataka, the government has announced a system of capitation fees to be paid by students for admission to private engineering colleges. These legalised donations range from Rs. 5,000 to Rs. 12,000. In addition, the fee structure continues in the private colleges which students have to pay. The Regional Labour Institutes, including the one in Guindy, Adyar, are to start courses for training Industrial Safety Officers, some 1,000 of whom are required under the Factories Amendment Act of 1976. Taking those with an engineering degree and 2 years supervisory experience in a factory, these courses will have also to be instituted in universities to train this large number of needed officers.

Science :

Group Technology (GT) which groups components on similarity in shapes, dimensions and technological features and uses a single machine tool or a group of machine tools to process them, is being used at the Central Machine Tool Institute, Mangalore and IIT, Madras. There is scope for a number of regional centres working on GT methods and transmitting the results to industry. The National Aeronautical Laboratory has designed a wind electric generator power source that serves as an alternative source of electricity to dry cells used in isolated electronic systems. It is being applied in communication stations, navigation buoys, aviation equipment in isolated places and as a power source for radios in isolated communities. Two students in the Murugappa Chettiar Memorial Polytechnic have developed a tandem pedal pump for pumping out water. It replaces the power pump and can be used in rural areas. It is based on the bicycle frame principle and an average person operating it can generate 500 watts of power, which in alternator generators can be stored for use later. Indo-US science

co-operation has agreed to concentrate on the use of low grade coal for power generation and five solar research projects, including the one on refrigeration. BHEL in collaboration with IIT, Madras has developed the first pilot plant of 10 kw of solar energy, which will be commissioned in December. The plant is to be used for heating water at Ashoka Hotel and to meet the power requirements of remote areas in the Himalayas. Soviet experts were in India in late June for the study of the behaviour of monsoon currents in the Bay of Bengal and Arabian Sea. This first phase of the Monex-79 project was a prelude to the world meteorological expedition scheduled for 1979. Also from June 1, India began a 2 year long series of experiments in the advanced technology of telecommunications. via a satellite, when the Satellite Telecommunications Experiments Project (STEP) is launched. The experiment being run by ISRO and Posts and Telegraphs Department will help further future development of the country's telecommunication system. STEP will use for 13 hours a day the Symphonie satellite loaned to the country by France and Germany. The experiment costing Rs. 2.50 crores will involve Telephones, radio and TV. Parallelly, the steering group on research on the bullock cart, referred to in the last issue (p. 393), has decided to initiate research on cart design, drought power, socio-economic features and road structure. The work has been shared out, the Central Road Research Institute working on cart design, ICAR on drought power and IIM on socio-economic studies. One immediate problem is to increase the carrying capacity of the cart while reducing the burden on the bullocks. The Soil Testing Laboratory at Aduthurai is undertaking soil evaluation studies in all the districts of the State—as a basis for application of fertilisers and as a way of monitoring the soil and other mining specific treament needed to produce crops with optimum levels of nutrient elements. In accordance with its earlier decision, the Union Health Ministry has provided Rs. 25 lakhs in the current year's budget for the Pasteur Institute, Coonoor. The Institute now becomes an Institute of national importance and will be increasing the production of vaccines. UGC announced in June a scheme of 3 year awards to promising young scientists, to enable them to devote themselves wholeheartedly to research and study. The awards will be open to lecturers and readers who are below 35 years of age and have completed doctoral, post-doctoral or other equivalent professional training. The Union government decided in June that CSIR and its 40 National Laboratories will come under the Union ministry of education.

Health :

The State government decided in June to provide financial aid to voluntary organisations and philanthropists for setting up hospitals and dispensaries in rural areas. The State government would contribute 1/3 of the cost and the Union government another 1/3 of the capital costs. The State government will also meet 2/3 of the recurring expenditures. Medical specialists have formed themselves in teams to visit rural areas and urban slums. Under this scheme, 6 lakh slum dwellers would be covered by 274 units through all the State. The All-India Conference of Practitioners of Indian Systems of Medicine and Homoeopathy meeting in New Delhi towards the end of June has recommended the establishment of a National Institute of Indian Systems of Medicine including Homoeopathy, and

a Central University in Delhi. It has proposed the use of the services of these medical personnel in the proposed rural health scheme in a full manner. It also suggested that demonstration units, museums and farms of medicinal herbs be developed in the villages. The government announced the formation of a corporation for centralised production of indigenous medicines at Ranikhet in UP.

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V Employment

The employment problem facing the country is serious. Of the working population of 180.4 million, 148.4 million are cultivators and agricultural labourers. Small scale industry cannot help the unemployment problem as far as unemployed or particularly unemployed rural youth is cencerned. They have been trained in modern crafts in multi-purpose schools and it is only through a dispersion of industries to the rural sector that employment for the people can be created. There are hurdles in employment creation. Dairy farming is held up by finance and poultry development by lack of doctors. Of 455 industrial estates, 347 are located in urban and semi-urban areas and 108 in rural areas, providing employment to 1.76 lakh person in 10,140 units. Here the shrinkage of demand has not allowed for real growth of these units. One positive area is the massive scheme of carpet weavers which has helped to develop woolen exports and the same may develop for other handicrafts whose internal market is limited. The government reports a rather serious loss of 11.48 million mandays in 1976 contrary to what the previous government reported. West Bengal lost 7.07 million mandays, UP 1.10 million mandays, Tamil Nadu 0.79 million mandays, Kerala 0.20 million mandays and Maharashtra 0.17 million mandays. In terms of industry, the highest loss was in manufacturing (9.14 million), followed by mining and community and social services (0.09 million each.) Kerala has under study a plan for a government agency to look after the interest of those seeking employment abroad. On an average 15,000 applications for passports are received in a month and 1,500–2,000 people go abroad. This measure would help job-seekers, the foreign agencies who have to go through government in seeking for persons and prevent misuse of facilities provided for job seekers. Also the government is setting up a self-employment cell in the Directorate of Employment to collect information on self-employment opportunities and encourage departments and banks to help people use these opportunities. The Kerala government is setting up a Youth Welfare Board, a welfare fund for fishermen, and Fishermen Development Corporation as part of its employment and industrialization drive. The Food Corporation of India announced at the

end of June that its port and dock workers are to get an ad hoc advance equivalent to the average monthly wage as part of a packet of demands implementing the recommendations of the Wage Revision Committee refusal of CFD and introducing of family security scheme which are under study by the Corporation. The leaders of the 4 port and dock workers Federations later in discussions with the Union minister of labour demanded a raising of the minimum wage of Rs. 320 recommended by the Wage Revision Committe, the merging of house rent and other allowances with basic pay, and periodic revision of uniform pay scales for all of them. The disturbed state of labour relations in the State and country in May and June call for a review of the points of contention but also a prior decision by labour and management to restore industrial peace, within which frame the negotiations can take place. The Union government announced in early June its decision that employees should be given the option to retire voluntarily on the completion of 20 years of accepted service. This is a proposal of the ARC which replaces proposals for compulsory retirement of staff for any one of several reasons.

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VI Other Items

Regional Labour Institute and Asan School:

The Regional Labour Institute, Guindy, in co-operation with a number of scientific and engineering organisation organised a 2 day conference on population and environment. The Conference brought together scientists, technologists and educators and decided on a programme of study and work to monitor levels of pollution and to take action to keep these levels down. It also drew up an educational programme to promote the objectives of World Environment Day on which the Conference ended. Asan Memorial School organised a celebration on the occasion of the visit of the Union minister who once more explained his doubts about the curriculum of the 10 year school, and the need to examine the nature of the student load and the necessity for new maths as a compulsory subject.

Chinmaya Foundation and Institute of Public Relations:

The Chinmaya Foundation organised a 4 day work camp in Madras at which the relevance of spiritual valves to the problems facing the youth of the country was the major subject of reflection. It was the general feeling that youth desires and needs a firm spiritual base which this country's traditional culture and heritage can help it to maintain and acquire. The Institute of Public Relations celebrated its annual day in mid June at which

certificates won by those who completed its public relations course were distributed. This is one of the employment preparation courses which is in demand and well organised and run by the Institute.

UGC Committee and ICSSR Research Committee :

A UGC Committee visited the University of Calicut to review its examination reform unit. It commended and approved its impressive programme of building question banks in all disciplines and recommended that the unit should widen its activities and cover all aspects of examination reform such as internal assessment, grading etc. The ICSSR Research Committee met in mid June and reviewed and approved some 40 research projects. Some of the projects which were presented late to the committee were held over to the next meettng. The meeting was also an occasion in which formal farewell was taken of the outgoing President Prof. M. S. Gore.

National Institute of Public Co-operation and WUS :

The National Institute of Public Co-operation, New Delhi, held its selection committee meeting towards the end of June at which some 40 candidates were interviewed to fill the posts of 4 Readers in social work, nutrition, pre-school development and communications and the posts of the Deputy Director, Librarian and Research Officers and Assistants. Recommendations were made for all posts except one—nutrition—for which a further advertisement was decided. The general body meeting of the World University Services met in the University at the end of June and approved the new management and rules of procedure for the WUS centre. However for want of a quorum, it adjourned the amendment of the Constitution to the next meeting in July.

Racing Committee and Institute of Financial Management :

The last but one meeting of the Committee on Racing was held at the end of June. Three individuals gave evidence to the Committee about the means of preventing the misuse of racing. The Committee also reviewed the first six draft chapters of its report, approved with slight changes and agreed upon the conclusions which should be incorporated in chapters V and VI. The Institute of Financial Management had a meeting of its Board of Governors and its general assembly at the end of June in Madras at its headquarters. The Institute's consultancy and training services are in heavy demand. In the first six months of 1977 it had run training programmes in various aspects of financial management and under consultancy services which were larger in number than those for all of 1976.

TNBCE and M.P.S.

At the end of June a meeting of the selection committee of the Resources Centre met and selected a specialist for its training division. Following this, the Governing Body of the Resource Centre met and approved its budget for 1977–78 and its programme for the year. There followed also a meeting of the Executive Committee of the Tamil Nadu Board of Continuing Education at which the evaluation of the San Thome Non-Formal Education Project and the expansion of this programme from 1978–79 was presented and approved. It was decided to maintain the execution of the extended

programme within the competence of the Board. Also at the end of June, the 72nd Birthday of Mr. M. P. Sivagnanam was celebrated recalling the three principles on which he has founded his party and conducted his life–love of Tamil, love of the Country and love of God. The occasion was used to commend this mix, particularly to the youth of the country.

Tamil Nadu Council of Historical Research and Executive Council of MIDS:

A meeting of the Tamil Nadu Council of Historical Research was held at the end of June at which the Fellows for 1977–79 were selected and confirmed. The fellowships programme for 1978–80 and their areas of research were agreed upon. The Council also established its rules of procedure and guidelines for publication of its research reports. The Executive Council of the Madras Institute of Development Studies, met on June 29. It approved the audited statement of Accounts for 1976–77, which will be published in the next Annual Report. It received with satisfaction the information that the government has granted it exemption from the land ceiling Act so that the building of the library can be undertaken. It approved the purchase of the land and building at the rear of the Institute at No. 11 Third Main Road, Gandhinagar, as a hostel for research scholars and to meet the future needs of expansion of the Institute.

University Events:

The first meetings of the Syndicate Committees on the Autonomous Post-Graduate Extension Centres for Coimbatore met in Coimbatore on June 13 and for Tiruchirapalli on June 18 at which the problems connected with the start of the academic year and rules under which the Centres' functions were reviewed and established. Selection committees also met in the 2 Centres and made recommendations for 8 posts of Professors, Readers and Lecturers in Botany and Chemistry for the two Centres. The UGC Committees on the Department of Defence Studies and the Department of Criminology visited the university at the end of June, reviewed the university plans for the two departments and agreed upon their recommendations to the university and the commission. The law commission appointed by the Syndicate to review and recommend the restructuration of legal studies presented its report to the university in early June. A meeting of legal education experts comprising the UGC and ICSSR panels, the Board of Studies, the Advocate General, the Principals, staff and students of the Madras and Pondicherry law colleges, and the two State governments and Madurai University met in the University on June 28, reviewed the report and made its recommendations to the government and the university on the reform of legal studies in the university. The 3 orientation courses for employment in office management, marketing, and foreign trade organised by the University and Directorate of Employment and Training held its valedictory function on June 25 at which the certificates for the 120 candidates who completed the course

were distributed. The post-graduate admissions for the academic year 1977-78 were finalised on June 24, 25 and 27. Of 10,818 applications, 2,753 were admitted to the various post-graduate courses. The Syndicate had its monthly meeting on June 30 at which the plans and progress of the university reform policy were reviewed and approved.

July Development Seminar :

The July Seminar paper, "Industrial Perspectives", by Col. T. V. Natarajan, Madras, together with the summary of the discussion of the paper which took place at the Seminar on Thursday 30th July appears as the first article.

Second Article :

The first part of a paper "Financing of Education" appears as the second article.

INDUSTRIAL PERSPECTIVES

By
T. V. NATARAJAN
Madras

"Humanity does not live by GNP alone" —*Paul A. Samuelson*

Introduction :

The focus of MIDS seminars this year is on sectoral perspectives. Tamil Nadu is one of the few states that has a perspective plan. The plan covers the period 1974–84 and thus spans both the fifth and sixth plans. This plan was drawn up by various task forces during the year 1971–72 and was based on 1970 statistics.

For Tamil Nadu, 1974 (first year of the fifth plan) was a critical year as the State was faced with a severe drought and power famine. The oil crisis affected all areas of development. Things did improve during the years 1975 and 1976. Due to the introduction of emergency and launching of the twenty point programme which eventually became a 25 point programme the fifth plan at national level was finalised only in September 1976. This meant finalisation of the State plan only towards the end of 1976.

Change in Central and State Governments :

As a result of the Lok Sabha elections held in March 1977, the Janata party has come to power at the Centre. After the June 1977 assembly elections AIADMK has assumed office in Tamil Nadu. The Janata party has promised to follow the Gandhian economic programme and the AIADMK is pledged to follow the late Anna. Fortunately there is a great deal of similarity in the approach of the Central and State Governments but this approach is radically different from what was followed during the last 25 years of planning. Any perspective plan is based mainly on certain objectives. As there is a distinct change in the objectives, there is a corresponding change in the perspective plan also.

Aim :

The aim of this paper is to analyse the present state of industrial development in Tamil Nadu and indicate the broad perspectives keeping in mind the new economic policy enunciated by the Central and State governments. The sixth plan period (1979–84) has been kept as the time frame.

Janata Approach:

The economic charter contained in the Janata election *manifesto* is given below:

1. Delete property as a fundamental right;
2. Affirmation of the right to work and a full employment strategy;
3. Stress on Gandhian values of austerity, 'Antyodaya' and a decentralised economy,
4. An end to destitution within ten years;
5. Appropriate technology for self reliance;
6. New planning priorities, notably the primacy of agriculture, agrarian reforms and more favourable terms of trade and higher allocations for the rural sector:
7. Narrowing down of rural urban disparties and a new rural urban nexus;
8. Emphasis on wage goods production for mass consumption;
9. Statutory reservation of spheres of production for small scale cottage industries.
10. A wage and price policy; raising the minimum tax exemption limit to Rs. 10,000 and exemption of land revenue on all holdings below 2.5 hectares;
11. Redistributive taxation and excise in lieu of sales tax
12. Formulation of a national water policy and a national energy policy.
13. Environmental care.

On 9 July 1977 speaking on the budget demands of the Ministry of Industries, Mr. George Fernandes summed up the five main objectives of the Janata Government as follows:

1. Maximisation of the production of consumer articles.
2. Optimising the utilisation of human and material resources.
3. Prevention of the concentration of economic power.
4. Speedy development of job oriented industries.
5. Making industry responsive to social needs.

The Janata approach is basically the Gandhian approach which is rather unpopular with most of our intellectuals who are familiar only with western models. We will have to take into consideration the present situation where the majority of our people live below the poverty line. People at all levels are getting disillusioned and they think that the ruling party and the bureaucracy are using the word 'planning' as some kind of *mantra* to solve all our socio-economic problems. Two of our top economists Dr. Malcolm S. Adiseshiah and Dr. C. T. Kurien have already warned us several times about the disappointment of the people in the efficacy of Indian planning.

People's plan

Mr. Charan Singh, Union Home Minister and a member of the Union Planning Commission has come out with a plan called the "People's plan No. 2". The broad features of this plan are given below:

1. The economy will become relatively less rapidly industrialised while modernising faster in terms of social services, public utilities, housing standards and agrarian economic conditions.
2. Industrialisation will be relatively more small industry oriented being more capable of dispersal and positive interaction with rural environment.
3. *Slower growth of population,* faster economic growth and faster rise of *per capita* incomes.
4. State sector becoming increasingly involved with the provision of services and public utilities.
5. Greater emphasis on transport and construction with emphasis on power generation reduced.
6. The process of growth will become somewhat more consumption oriented and less capital accumulation-oriented.

The above plan has been drawn by the Indian Renaissance Institute founded by the Late Mr. M. N. Roy, a renowned Marxist-humanist. This plan has been commended by the Union Finance Minister Mr. H. M. Patel. The Union Planning Commission is likely to give serious consideration to this document while drawing up the sixth plan.

AIADMK Approach

Only when the State budget is presented in the second half of July, 1977, it will be possible to know the detailed economic approach of the AIADMK government. Following excerpts from the Governor's address to the joint sitting of the two houses on 7 July gives the broad outline on economic development with particular ideas for industry.

—As 70 per cent of the people live and work in rural area, it is necessary to have a multi-pronged and integrated approach to rural development based on agriculture, irrigation, agro based and other small scale industries.

—Rural people should get direct benefits through employment and more incomes.

—Living conditions in the rural area will be improved.

—Provision of employment for unskilled labour in rural area for off-season.

—Handloom weavers, fishermen, SC and ST will receive support and assistance.

—Investment in power development, irrigation and ground water will receive greater attention.

Similarity in approach

Though the party in power at the Centre is different from the party ruling the State, it is evident there is a similarity in their economic approach. Both the Centre and the State government have stressed the following aspects.

1. Reduce unemployment.
2. Give priority to the problems of the people below the poverty line (this is 59 per cent in Tamil Nadu).
3. Accent on *swadeshi* and self-reliance.
4. Improve living conditions in the rural areas and thereby stop the exodus to the towns.

Performance & Prospect :

Plan outlay on Industries and Mining is given in *Table A I in the Appendix.*

Industrial production in Select Industries is given in Table A II in the Appendix.

Let us now look more closely at some of the key industries.

Sugar

This is one of the major industries. There are 16 sugar mills in the State—9 in the private sector and 7 in the co-operative sector. The installed crushing capacity is 29,000 tonnes per day of which 33 per cent is in the co-operative sector. Crushing capacity is likely to reach 46,000 tonnes by the end of the fifth plan. With a total gross fixed investment about 60 crores this industry directly employs about 14,000 persons and also provides subsidiary employment to about 10 lakh persons engaged in ralated activities of cane caltivation, transport etc. The industry pays about 50 crores of rupees by way of prices for sugar cane purchased to about 80,000 growers per annum [1]

Comparative production figures from 1972-73 season are given below:

TABLE I SUGAR PRODUCTION IN TAMIL NADU, 1972—73 to 1976—77.

Year	Cane crushed (tonnes in lakh)	Sugar Production (tonnes in lakh)	Recovery per cent	Duration in days (working hours 22)
1972-73	42.37	3.49	8.24	188
1973-74	55.88	4.69	8.39	225
1974-75	48.27	4.08	8.46	177
1975-76	21.46	1.98	9.24	97
1976-77 (main)	38.67	3.30	8.53	135 (approximate)

1. Statistics/Reports—Department of Industries, Government of Tamil Nadu.

While the co-operative mills are doing fairly well, those in the private sector are badly hit because they are not getting the requisite quantity of sugarcane. The position is particularly bad in western Tamil Nadu where land owners prefer to cultivate rice or turmeric or sell their sugarcane for jaggery manufacture. I understand the net income per year per acre from rice has gone up from Rs. 3,000 to Rs. 5,000 whereas the income from sugarcane has remained at Rs. 4,000. There is a need for a zonal pricing system as well as a higher price for levy sugar. The industry is waiting for the decisions of the concerned committees. There is also a need for achieving some kind of balance between food and cash crops.

The industry is also advocating decontrol of sugar but in the present politico-economic environment, this may not be possible. The industry must also try to cut down cost of production by keeping in touch with the modern technology. An example is the Tate and Lyce's Talofloc process for decolouring in sugar refinery which has been recently approved by the U.S. Drug and Food Administration.[2]

Tamil Nadu produces a lot of alcohol but has not developed alcohol-based industries. At present we just sell most of the alcohol to the other states. We also have a lot of mollasses as a by-product in the sugar mills and there is scope for manufacturing a wide range of products using this as an input.

Cotton Textiles:

This industry has been in deep trouble particularly during the last 30 months. Several textile mills have gone sick. The basic problem with spinning mills (most of the textile mills in Tamil Nadu are spinning mills) is that they have to pay a high price for cotton (input) but they cannot get a remunerative price for the yarn (output). This makes the industry unprofitable. The handloom industry which is the buyer has its own problems. Thus there is a vicious circle.

Added to this is the preference of the people for man made fibre. This is not something peculiar to Tamil Nadu or India. In the United States also there is a constant decline in the area of cotton cultivation.

In Western World the man made fibre consumed has more or less equalled that of cotton. Though cotton cannot be replaced totally as tropical countries like ours will have perpetual demand for cotton fabrics the changing pattern of consumption calls for increase in the man made fibre usage in the industry. During the last 7 years, the consumption of all fibres has made nearly a three fold increase. The polyester production in the country has increased from 5,729 tonnes during 1971 to 14,336 tonnes during 1975 an increase of nearly 250%. However, the viscose staple fibre has gone up only by 10% and all others have more or less remained constant. It is obvious from the forgoing that polyester fibre is proposed substitute for cotton. The proportion of mixing with cotton varies from 50 : 50 to 67 : 33 or even 100% in certain cases. Besides polyester, staple fibre is consumed in the region of 60,000 tonnes per annum by the mills.

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2. *Kisan World*—a monthly publication by Sakthi Sugars Ltd. April and June, 1977

The recent liberalisation of import of polyester, viscose and polynosic fibres is only to augment the scarcity of cotton in the country. The Textile Commissioner has made it statutory for the mills to adopt a multifibre policy of 90% cotton and 10% other fibres. These directives are *indicative of the growing demand for* cotton on the one hand and the inevtiable change in the pattern of production on the other. The *per capita* consumption of man made fabrics is bound to increase from the present level of 2 mts to 3.5 by the end of 1979-80. This will mean a total shift on the part of the mill sector from pure cotton to blended yarn and blended fabric.

The yarn production in blended yarn has gone up from 34 M. g in 1971 to 40.5 M. g during 1975 an increase of 30%. In terms of the total yarn production in the country, it forms hardly 4%. This is bound to increase to 8% in the next two years. Hence the Government must allow substantial expansion of the existing units producing polyester and viscose fibres.[3]

Apart from other problems there is a need to make sure that every textile mill gets the requisite quality and quantity of the cotton preferably from the neighbouring area. This is possible if a system of area registration (similar to the one already in force in respect of sugarcane) is introduced. This again means total planning which implies control at all stages over the instruments of production as done in communist countries. This may not be possible in our democratic set up.

Leather and Leather Goods Industry in Tamil Nadu

The leather industry occupies a unique position in Tamil Nadu's economy. In the country, one fifth of the foreign exchange earnings is contributed by the leather industry. Tamil Nadu accounts for 70 to 75 percent of the total leather exports from India, worth nearly 200 crores per annum. This labour intensive industry offers employment to over 5 lakh workers. During the last 2 years, Tamil Nadu has been responsible for 85 to 90 per cent of the total exports from India.[4]

The State, which accounts for about 6 per cent of the total livestock population in India, has made rapid strides in the development of leather and leather goods industry like E I tanning, finished leather, leather manufacture, leather sports goods, leather foot wear, tanning and foot wear machinery and leather auxiliaries. (There are nearly 600 small scale units manufacturing semi finished leather in the country and 75 percent of them are in Tamil Nadu).

The first functional estate for leather and leather goods industry in the country was set up at Madhavaram near Madras. The Government of Tamil Nadu proposes to set up another functional estate in North Arcot district for the promotion of leather goods industry and the possibilities of establishing a third estate at Erode are also being explored.

The small tanners in Tamil Nadu do not generally use modern methods of tanning. In order to make them properly utilise their knowledge and skill for

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3. *Kisan World*—April and June 1977
4. *Statistics/Reports*—Dept of Industries Tamil Nadu

promotion of the industry, a Service Industrial Co-operative Society has been set up at Vaniyambadi and more such societies are proposed to be set up at Ranipet, Ambur Pernambut and Dindigul. These centres will provide technical assistance to small tanners.

Leather industry has been chosen as one of the industries for intensive development under central modernisation programme in Tamil Nadu.

Efforts are under way to get substantial aid for this industry from the World Bank and to utilise the various facilities offered by the Bharat Leather Development Corporation Limited to the fullest extent.

Export of Leather and Leather Goods is shown in Table A III in the appendix.

If Tamil Nadu has made phenomenal progress in the leather sector, a great deal of credit must go to the CLRI (Central Leather Research Institute) Madras and Dr. Y. Nayudamma who directed the work of this institute for several years with great dedication. The prosperity in this Industry has produced some leather-lords but the affluence must be shared much more with the workers at the lower level whose conditions of work and living have not been improved.

By keeping in touch with the world of fashion (nay even moulding it) the industry can maintain a leading position in exports. There is a tendency to market semifinished leather goods. Every effort must be made to produce finished products. Only then will there be more production, employment and progress.

Electronics :

For a State like Tamil Nadu which has well nigh exhausted its energy, land, water and mineral resources the only hope is electronics. Fortunately Tamil Nadu is blessed with skilled and intelligent people which is the main requirement for development of electronics. For some inexplicable reason, Tamil Nadu is a late starter in this area. Nevertheless the State government and some entrepreneurs have woken up and several measures are being taken to catch up with the other states.

A good beginning was made with the setting up of Instronics Estate in Adyar. A data bank of information has been added.

Functional industrial estates for electronics have been esteblished at Kakkalur, Tiruchirapalli and Hosur and three more estates at Coimbatore, Salem and Madurai are being set up. These estates are aimed at developing specific electronic cultures in specific areas for growing Industrial Electronics Process controls Components, Consumer electronics and Medical electronics. The annual turn over of electronics items in the State rose from Rs. 25 lakhs in 1969-70 to over Rs. 450 lakhs this year. There are about 350 units producing a variety of sophisticated items and employing about 35,000 persons.[5]

It is proposed to set up an 'Electronics Development Corporation' so that this important industry will receive special attention.

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5. Statistics/Reports—Department of Industries, Government of Tamil Nadu.

Tamil Nadu should follow the example of Japan (both have similar constraints in natural resources) and give the utmost priority for development of electronics.

For those who scoff at the Gandhian economic approach, the phenomenal development of electronics as a cottage industry in Japan should provide a convincing answer.

Electronics is becoming all pervasive and it is going to play a dominant role in all areas of activity. It has a great spin off effect.

Following guidelines are suggested for future development of electronics in Tamil Nadu:

a. Set up the State electronics development corporation without further delay. Choose a good Managing Director and give him a free hand. What is required is to develop a highly competent and motivated group of people.

b. Establish contact with our brilliant Indian men and women abroad and persuade them to come back at least for a tenure assignment.

c. Include electronics (both theory and practical) in the school and ITIs syllubus so that we have abundant technical man power.

d. Encourage people to come out with 'new products and processes'.

e. Study the methodology followed in Japan and improve on it.

f. Set up test and development centres at the scale of one per district along with a functional instronics estate.

g. Establish an electronics export promotion zone in Tambaram area on the lines of SEEPZ (Santacruz Electronics Export PromotionZone).

h. Cut down red tape keeping in mind the valuable lessons learnt from the growth problems of small scale industry.

Small Scale Industry

The number of small scale units in Tamil Nadu at the end of 1975 is officially put at 36,905.

There is a high degree of territorial concentration. Madras, Chingleput, and Coimbatore districts have 10,860, 4,356 and 3,686 units respectively and thus account for more than 50% of the total units functioning in Tamil Nadu. However a more even distribution is observed in a cross-section break up of these units as agro based industries account for 25.9 per cent, mineral and metal based for 39.2 per cent, chemical based for 20.2 per cent and miscellaneous units 14.7 per cent (as on 31 December 1975).

The development of the small scale sector in the State merits serious consideration as these units with their labour intensive technology, moderate capital investment and short gestation period could offer solution, at least in part, to the problems of rural underemployment, educated unemployment and regional imbalances in industrial advancement. The assistance to this sector in the past has come in the form of provision of factory sites, granting of subsidies and sanctioning of credit at concessional rates.[6]

6. *Economic Appraisal* of Tamil Nadu, 1976

The provision of factory sites is made through the allotment of worksheds to new entrepreneurs in industrial estates constructed for specific purposes. Among different types of industrial estates func–tional estates, a concept of recent origin, has gained special significance. These estates by locating a number of units producing the same type of product on a single factory site help specialisation and improvement of the competitive strength of these small units against their large scale counterparts. These functional industrial estates presently concentrate on the development of leather, ceramic, elec-trical and electronics industries.

During 1974–75 Rs. 76.70 lakhs were spent on the development of small scale sector in the State. Of this total amount, the departmental units claimed Rs. 30.10 lakhs, industrial estates Rs. 38.43 lakhs and provision of developed plots Rs. 8.17 lakhs. Outlay on this sector has been stepped up in 1975–76 to Rs, 96.03 lakhs of which Rs. 73.95 lakhs have been allotted to the departmental units.

Tamil Nadu has certainly an impressive record of growth in respect of small industries, but those engaged in the small scale industry are continuously facing a large number of problems as they have to look after all functional areas of management. Referring to the plight of the small scale sector, the Minister for Industry Mr. George Fernandes said "the small scale sector with 97 per cent tiny units is often at a disadvantage because of stiff competition from larger industrial houses with superior marketing tech-niques. In spite of the nationalisation of bigger banks, the small scale sector often faced difficulties in getting the necessary credit".

Mr. R. Venkataraman, former Minister for Industries Tamil Nadu feels "small scale sector should devote itself to the manufacture of ancillaries components and parts needed by large industry." This is also the practice in Japan, where 70 per cent of the small enterprises are connected with large organisations, one way or the other. It is also economical for large industries to buy components and parts from small industries due to the low overheads and costs. This will also ensure that the large industries pass on the latest technology to the smaller units.

CONNECTED AREAS

Innovation and entrepreneurship

Though the growth of small scale industries in Tamil Nadu is impressive, there is no corresponding growth of entre–preneurship. This is a rare talent and has to be cultivated. As Mr. M. S. S. Varadan puts it "they are the job creators rather than job seekers and their stake in the growth of economy is very high because their fortunes and problems are directly dependent on whether the economy is growing or a stagnant one"

Schumpeterian Innovation

Unless we foster entrepreneurship, there will be no innovation. The views of Mr. Joseph Schumpeter, Austrian born economist who taught at Harvard, are extremely stimulating—'He is the man with vision, originality and daring. He may not be a scientist who invents the new process, but he is the one who successfully introduces it'. Schumpeter emphasised the role of the innovator i.e., the inventor, the developer, the promoter, the man who initiates and recognises technical improvements and who succeeds in getting them introduced. There is a

need to encourage innovation and the least that the State can do is not to kill this spirit.

Technology

No paper on industrial perspectives can be complete without a reference to technology. As there is a separate seminar this year on R and D, the subject of technology is discussed only briefly. Thanks to the good work done by our national laboratories and higher institutes of learning, our country has the third largest reservoir of technical man power and Tamil Nadu occupies a leading place amongst the States. Whilst we must keep in touch with the latest technology, a developing country like India must avoid the temptation of blindly copying or adopting high technology. The well known British economist, Mr. E. F. Schumacher in his excellent book 'Small is Beautiful' advocates appropriate technology—an idea especially useful in the resource short countries of the developing world. Here is an example to prove Mr. Schumacher's approach.

'Nigerian villagers use a 16 dollar hand operated metal bending device to make agricultural tools; the cheapest machine available to do the job costs 1,750 dollars and requires electricity'.

Even in highly developed countries like the U. S., Schumachar maintains that appropriate technologies—solar heating, smaller farms and waste recycling systems, for example, are needed to stave off energy shortages. He also believes that industrial nations must produce more *efficient and durable products;* preferably by a less automated, less dehumanising technology. Mr. Schumacher repeatedly stresses that 'bigger is not better' and believes that industry should decentralise into smaller self-contained units. There is a strong feeling in India that in the fifties and sixties, too much emphasis was placed on 'gigantism' and that is the reason for many of our present problems. Following examples given by Mr. Paul Samuelson are worthy of serious consideration by all developing countries.

Example 1 :

"Farming is inefficient in many backward countries. You see peasants breaking up the soil by the same primitive methods their ancestors were using back in the time of David and Solomon. Perhaps an ingenious light to glow something simple that would cost no more than a dollar and would pay for itself in the first month can be found that will both lessen the total amount of capital needed and greatly increase the output. This shows how technological innovation can often be capital saving rather than capital using".

Example 2:

"Time and time again, experience has shown us how easy it is to obtain a foreign loan to put up a model facotry in Turkey or Burma. Often it is imported piece by piece from abroad and embodies the latest wrinkles of Western technology. Yet, with what result? With high production and sales in excess of costs, yielding a comfortable profit that can be plowed back into further industrialisation? Only too rarely. Often such grandiose imported projects turn out to be extremely unprofitable. The factory that is an optimal investment for New York may in Ankara or Rangoon be a fiasco". It is relevant to point out that Gandhiji was not against machines or technology. He only warned men not to become a slave to the machine.

Management

It has been said that 'India is not an underdeveloped country but an under-managed country'. We have good human and natural resources but we are not utilising them properly. In Tamil Nadu we have a large number of skilled and semi skilled people, but there is a need to organise them into a work force, give them orientation training, equip them with the necessary tools and fit them in proper projects.

Some preliminary work has been done to set up an Institute of Management on the lines of other three institutes in Ahmedabad, Calcutta and Bangalore. It was also said that this institute would specialise in the management of agriculture and allied subjects. Early action should be taken to establish this institute.

Somehow the word management has become a status symbol and only a privileged few at the top get initiated into the mysteries of management tools and techniques. Effective and efficient management is a *sine qua non* for development and progress at all levels whether an individual, a family or a corporation. In order to prevent concentration of economic power, we have nationalised a large number of business and industrial organisations but there has been a steady deterioration in their functional efficiency. This in turn has meant huge losses which are borne ultimately by the people. There is only one remedy and that is to improve the quality of performance and that is the need of the hour in factories and farms, schools and hospitals, panchayats and transport undertakings. Effective management can be achieved only through proper training and orientation.

As we need managers by the million management should become one of the subjects even at the school leaving stage.

Integrated Management Information System

During recent years, the planning commissions,both at the Centre and at the State level, have realised the need for correct and up to date information. It is not an exaggeration to say that information is the most important input in all planning operations. Since the volume of information even in a single sector of economic development has grown to enormous proportions, we must resort to the use of computers. The need for building an integrated management information system not only at the planning stage but more so in the monitoring and evaluation stage has been realised by the State Government. Government Data Centre was, started in Oct 1972, is processing data in the areas of transport, education, commercial taxes, public works, etc. The trend in advanced countries is to use large scale integrated management information systems and hence it has been decided to adopt the IMIS, so that all State departments may function as parts of an integrated system, and avoid redundancy of data collection, eliminate the transmission of useless data from one department to another and avail themselves of the expanded data base to the maximum extent and ensure optimal performance. Tamil Nadu government has been a pioneer in the use of computers but there is a scope for increasing and intensifying the range of computer activities.

Pollution

Industrial development must be carried out without polluting our environment.

Otherwise we will have to pay a heavy price at a future date. Even though Tamil Nadu is only in the early stages of industrialisation, we have reached a dangerous stage in respect of pollution. Dr V. C. Kulandaiswamy who presented a paper on 'Pollution in Tamil Nadu' says:

"In Tamil Nadu, a sizeable water pollution problem exists today. The river Cauvery has been receiving partly treated or untreated effluents from chemical industries at Mettur, paper mills at Pallipalayam, sugar mills at Pugalur and distillery at Trichy. The river Bhavani, a tributary of the river Cauvery receives the effluent from the Viscose plant at Sirumugai and Sugar mills at Appakudal near Erode. The combined effect of all these during the dry weather period could be that several towns downstream will be using water that is unsafe.

"The tanneries in and around Pallavaram, Vaniambadi, Ambur and other places have been discharging their wastes on land and nearby drains. This has resulted in high build up of salt concentration in the wells in the locality. All these point to the need for planning a proper waste treatment system along with the product on scheme even at the time of erecting a plant or establishing a major industry. By spending a small amount on treatment facilities for the wastes, a huge economic loss to the State could probably be avoided. Even in a developing country like ours, it is necessary to plan and enforce certain regulatory measures for the establishment of new industries. A comprehensive water quality planning has to be undertaken to effectively control water pollution and to preserve the water quality".

ENERGY

It is needless to stress the importance of cheap and adequate energy for the successful implementation of all industrial projects. The vagaries of weather has meant not only a set back in agriculture but also in industrial development. Tamil Nadu Economic Appraisal 1976 says:

"It is feared that there would be a deficit of 1,465 M.W. by the end of the Fifth Plan. Besides the commissioning of two new projects viz. Ennore extension and Naduvattam diversion scheme in March 1976 and Kuttiar pumping scheme in the near future, the State Electricity Board also has proposals for eleven continuing schemes in three new schemes. There are also nine projects awaiting clearance by the Government of India of which one would be in the thermal sector with the remaining eight in the hydel sector. With an estimated cost of Rs. 209.94 crores these nine schemes would create an additional power capacity of 890 M.W. with an annual energy potential of 4000 m.u. However the actual remedy for the difficult power position the State would face during the 1980s should come in the form of speedy action on the Neyveli second Mine cut with a Super Thermal Station and the Kalpakkam Nuclear Project" [7]

Bio-gas

This is an area with plenty of scope for following Gandhiji's teachings. Bio-gas has the benefit of double action. It produces smoke free fuel and energy as well as rich manure. Our country has an abundant cattle population which has

7. *Economic Appraisal* of Tamil Nadu, 1976

been estimated at 237 million in 1972. The annual output is about 300 billion cubic metres and 200 million tonnes of manure which equals 200 million tonnes of kerosene. Apart from this, there are also other organic wastes which can feed the gobar gas plant and produce valuable methane gas. A bio-gas plant works on the principle that an aerobic fermentation of cellulose materials causes the production of combustible gases... A bio-gas plant is capable of digesting all organic wastes like human and animal excreta, poultry droppings, agricultural and industrial wastes. However, in India, the main stress has to be on the use of cattle dung.[8]

On an investment of Rs. 2,075 on a bio-gas plant the rucurring expenditure will be Rs. 344.77 and the income will be about Rs. 512.81. The gas generated can be used for such purposes as cooking food, heating water, energising pump sets, lighting gas lamps and running internal combustion engines. The residue, left over, is an ideal organic manure. Besides, there are a few other benefits such as control of environmental pollution and prevention of deforestation for fuel. The rate of return on investment works to about 19% per year. Reserve Bank estimate has established that the investment in a big gas plant is very profitable.

Whilst every effort must be made to augment our energy resources, simultaneous steps must be taken to conserve energy, adopt a policy which is fair to all consumers and ensure that we are ready to face an energy crisis. We can derive a great deal of benefit by following ten wise principles enunciated by the U.S. President Mr. Jimmy Carter (I prefer to call these Carter's commandments).

1. We can have an effective and comprehensive energy policy only if the government takes responsibility for it and if the people understand the seriousness of the challenge and are willing to make sacrifices.
2. Healthy economic growth must continue. Only by saving energy can we maintain our standard of living and keep our people working.
3. We must protect the environment. Our energy problems have the same cause as our environmental problems—wasteful use of resources. Conservation helps us solve both at once.
4. We must reduce our vulnerability to potentially devastating embargoes. We can protect ourselves from uncertain supplies by reducing our demand for oil, making the most of our abundant resources such as coal, and developing a strategic petroleum reserve.
5. We must be fair. Our solutions must ask for equal sacrifices from every region, every class of people, every interest group. Industry will have to do its part to conserve, just as consumers will. The energy producers deserve fair treatment but we will not let the energy companies profiteer.
6. The cornerstone of our policies is to reduce demand through conservation. Our emphasis on conservation is a clear difference between this plan and others which merely encouraged crash production efforts. Conservation is the quickest, cheapest, most practical source of energy.

8. *Kisan World*—April and June, 1977

7. Prices should generally reflect the true replacemet cost of energy. We are only cheating ourselves if we make energy artificially cheap and use more than we can really afford.

8. Government policies must be predictable and certain. Both consumers and producers need policies they can depend on so they can plan ahead.

9. We must conserve the fuels that are scarcest and make the most of those that are more plentiful. We cannot continue to use oil and gas for 75 percent of our consumption when they make up only 5 per cent of our domestic reserves. We need to shift to plentiful coal while taking care to protect the environment, *and to apply stricter safety standards* to nuclear energy.

10. We must start now to develop the new, unconventional sources of energy we will rely on in the next century.

Employment :

In future all our planning will be mainly employment oriented. Dr. C. T. Kurien in his paper says;

" Reaching full employment by 1983-84 is one of the aims of the Perspective Plan. The fifth plan is expected to make a significant contribution in this area. It is calculated that the backlog of unemployment at the commencement of the Fifth Plan will be 55 lakhs. Addition to the labour force in the years 1974-75 to 1978-79 is estimated to be 19.60 lakhs. It is expected that the investment during the fifth plan period will create opportunity for absorbing about 35 lakhs of workers so that the Plan will end with a backlog of unemployment less than at the beginning, about 37 lakhs. (Calculations are that the size of unemployment will be brought down to just over one lakh by 1983-84). The plan also expects to bring down significantly the percentage of population below the poverty line. It is estimated that at the commencement of the plan 43.7 percent of the population will be below the poverty line (consumer expenditure of below Rs. 40 per month). It is expected that the stepping up of investment and the increase in income will bring down the percentage of those below the poverty line to 32. (Here again the calculations are at the end of the Sixth plan only 2.8 percent of the population of the State will suffer from dire poverty" [9]

The Task Force on Human resources adopting the project approach to employment generation has estimated that an investment of Rs. 12,000 (70/71 prices) will be needed to generate one job. In the context of the new economic approach based on Gandhian line the spread of Khadi and Village industries including such sophisticated items like electronics will bring down the investment required for generating jobs. For example amber charkha (an innovation from Tamil Nadu) costs only a few hundred rupees and a person using amber charkha can easily earn Rs.4 per day. This may not sound much but it does mean a lot for a family that is now below the poverty line. Another exmple is by employment potential from bio gas. Mr. V.V. Giri, our former President, in his book 'Jobs for millions' has convincingly

9. MIDS Bulletin Vols. 1974, 75 and 76.

proved that it is possible to eradicate unemployment. He has given several ideas and suggestions so that 'every acre becomes a pasture and every house a cottage industry.'[10]

Post Industrial Society

Whilst we are in the process of moving towards industrial society to achieve the right perspective, we should look ahead and note the condition of the people in the 'post industrial society'. It is relevant to mention here that even in countries which have reached the stage of industrial society the accent is not on GNP (aggregate of Goods and Services) but NEW (Net Economic Welfare).

Prof. Daniel Bell who teaches sociology in Harvard and author of the book 'Post Industrial Society' says;

"I use the term 'post industrial society' in the sense of a society having a different relationship to science and a different relationship to the utilisation of knowledge. For me the chief characteristic of post industrial society is the emphasis on information and knowledge. A study of the social consequences of the revolution in computers, which I did at the Massachusetts Institute of Technology, came up with some interesting figures.

"They indicate, that at least in the US more than half of gross national product (GNP) is generated in the information sector. Also more than half the workers are in the sector. If that sounds a high figure, remember that much of manufacturing today is essentially information processing—programming, scheduling, quality control, marketing. Even a large part of agriculture is involved in information processing—crop recording, scientific work, marketing.

"In the US 30% of the labour force is in manufacturing. But only about 17% of that is in production. I think it is not inconceivable that, by the year 2000, there will be only 5% of the labour force in the U S doing industrial production.

"If that seems extreme, let me ask you how many people, 40 years ago, would have predicted that only 3% of the U S labour force today would be in agriculture? Yet that 3% is producing enough food not only for America but also for a large part of the rest of the world.

"In a post industrial economy you have three kinds of services. You have professional services such as computers. You have human services, which include education and health. You also have the growth of administrative services, both within public and private bureaucracies."[11]

Conclusion :

Both at the Centre and at the State level, there is a distinct change in the objectives of approach to planning. This in turn means a new perspective in all sectors. As far as industry in Tamil Nadu is concerned, following are the likely development trends.

a. Priority for employment generation.

b. Shift from urban to rural area.

c. Preference for labour intensive projects.

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10. Jobs for our millions—V. V. Giri
11. *International Management*, May, 1972

d. Accent on appropriate technology.

e. Priority for leather and electronics.

f. Encouragement to small industries, Khadi & Village industries.

g. Stress on effective management and labour participation.

h. Prevention of pollution.

i. Reward for innovation, hard work and efficiency.

j. Energy conservation

There is a new hope every where and people believe that poverty is curable and it should be possible through proper planning to provide employment to all the citizens so that they can earn a livelihood and live a decent life. This is the environment in which industry must grow and justify its role.

Reference

1. Tamil Nadu Economic Appraisal (1976).
2. Tamil Nadu Perspective Plan (Summary)
3. Tamil Nadu Perspective Plan (large industries)
4. Tamil Nadu Perspective Plan (small industries)
5. Techniques of Perspective Planning
6. Plan Implementation
7. Fifth Plan (Govt. of India Document)
8. Jobs for our millions—Mr. V.V. Giri
9. Sastri lectures—Mr R. Venkataraman
10. The Hindu—June & July 1977
11. Industrial Management—May 1977
12. Newsweek—28 Mar 1977
13. Kisan World—Apr & June 1977
14. MIDS Bulletin—Vols. 1974, 75 & 76
15. Statistics/Reports—Dept. of Industries, Tamil Nadu
16. 'Economics'—Paul A Samuelson

TABLE A I

TAMIL NADU PLAN OUTLAY FOR INDUSTRIES AND MINING

(Rs. in Lakhs)

	I Plan 1951-56	II Plan 1956-61	III Plan 1961-66	Three Annual Plans 1966-69	IV Plan 1969-74	V Plan Provision 1974-79	1974-75	1975-76	1976-77 (R. E.)	1977-78 (B. E.)
Large and medium Industries			160	781	1,336	3,716	458	666	803	885
Mineral Development			—	29	55	83	10	9	15	24
Village & Small Industries			2,213	846	1,909	2,337	398	308	432	472
Total Industries & Mining	153	1,408	2,373	1,656	3,300	6,136	866	983	1,250	1,381
Total State Plan Outlay	8,039	18,776	34,715	26,618	55,890	1,12,232	14,139	18,625	22,680	26,088

Source: Plan Documents

TABLE A II

INDUSTRIAL PRODUCTION IN SELECT INDUSTRIES IN TAMIL NADU

Industry	Unit	1961	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
1. Cement	'000 tonnes	1,187	1,889	1,846	1,989	2,271	2,393	2,798	2,810	2,275	2,361	2,571	3,291
2. Caustic soda	'000 tonnes	54	104	105	93	104	109	113	120	91	104	95	95
3. Mixed fertilsers & superphosphate	'000 tonnes	184	278	246	194	214	235	245	240	224	213	548	490
4. Electricity	Million kwh	2,552	4,103	4,441	4,896	5,152	5,274	5,925	7,025	6,701	7,101	7,528	8,964
5. Automobiles & automobile bodies magd. & assembled.	Nos.	6,934	8,179	10,433	9,163	9,389	8,662	8,758	7,753	9,178	11,072	9,660	12,169
6. Diesel engines	'00 Nos.	147	335	365	285	312	225	220	318	554	571	357	390
7. Power transformers	'00 KVA	331	1,201	1,027	692	630	949	1,399	1,257	1,191	914	1,151	1,135
8. Electric Motors	'00 Nos.	278	637	714	927	998	938	983	956	1,156	1,205	943	979
9. Cotton Yarn	'000 tonnes	128	160	166	158	164	176	162	160	151	164	167	185
10. Tyres	'000 Nos.	2,003	4,376	5,656	5,795	6,514	6,651	6,605	4,734	4,973	7,333	6,364	7,152

TABLE A II (Contd.)

	Industry	Unit	1961	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
11.	Camel back	tonnes	2,843	3,491	4,075	3,785	4,809	6,664	4,297	4,086	2,900	3,593	2,046	1,976
12.	Cotton woven piece goods	metres in million	190	134	143	160	165	174	153	153	144	145	153	167
13.	Tea	'00 tonnes	398	485	471	531	490	535	524	496	450	499	572	478
14.	Sugar (refined)	'000 tonnes	130	202	216	261	323	329	326	303	352	420	323	194
15.	Bicycles	'000 Nos.	276	230	303	402	378	393	369	472	371	430	329	341
16.	Safety Matches	Lakh gross boxes	217	315	324	344	340	373	409	362	397	499	504	1,032
17.	Motor cycles	'00 Nos.	47	63	65	90	98	102	109	123	133	165	190	184
18.	Wheat Products	'000 tonnes	105	178	140	137	170	228	248	256	124	94	138	135
19.	Hydrogenated oil	'00 tonnes	12,790	12,794	13,213	14,163	14,814	16,719	25,780	18,672	7,852	8,623	6,688	6,835
20.	Jerda	tonnes	7,912	7,259	7,008	7,358	7,496	7,361	7,792	7,534	7,323	7,281	8,103	8,681

Source: The Director of Statistics, Madras.

TABLE A III

EXPORT OF LEATHER AND LEATHER GOODS

(Rs. in lakhs)

S. No.	Description	1975–76 (All India)	1975-76 (Tamil Nadu)	1976–77 upto Oct 76 All India	1976–77 upto Oct 76 Tamil Nadu
I	E I Tanned Hides			5,904.00	5,761.67
	Cow hides	1,082.12	1,072.72	—	—
	Cow calf skins	434.98	434.20		
	Buffalo hides	66.34	35.23		
	Buffalo calf skins	576.52	576.52		
	Wet blue	—	—	3,208.16	690.90
II	E I Tanned skins	—	—		
	Sheep skins	2,430.74	2,292.04		
	Goat skins	3,453.35	3,230.62		
III	Wet Blue Chrome Tanned Hides and Skins				
	Cow hides	40.61	1.21		
	Cow calf skins	0.76	—		
	Buffalo hides	4.67	—		
	Buffalo calf skins	30.45	—		
	Sheep skins	75.38	14.47		
	Goat skins	4,030.18	2,106.57		
IV	Finished leather	4,035.40	3,247.64	6,610.82	4,796.97
V	Leather goods	638.62	54.73	489.24	75.98
VI	Industrial leather manufacturing	58.38	8.10	47.44	1.12
VII	Leather footwear	1,197.93	12.11	1,195.22	15.00
VIII	Footwear Components	56.99	20.14	127.49	97.04
IX	Tanned Furs	0.09	—	—	—
X	Bones	—	—	316.83	118.17
XI	Tanned Reptile skins	200.00	102.70	66.62	14.34
XII	Goat hair	108.58	20.63	56.53	8.41
XIII	Other hair	5.77	00.43	—	—
	TOTAL	18,527.86	13,410.08	18,122.35	11,579.90

Summary of Discussion

In the discussion of the paper at the Seminar held in the Seminar Room of the Institute on Thursday 28th July, 1977, under the Chairmanship of Dr. V. Shanmugasundaram, Member-Director, University Planning Board, University of Madras, the author in his opening remarks stated that economic planning at national level is influenced considerably by the prevailing political institutions and ideologies. During the last few years, economists in India have warned policy makers of the need to pay greater attention to basic issues such as patterns of production and instruments of implementation at various levels. The recent formation of Janata party governments at the centre and in many of the States has meant a shift to Gandhian ideology with the elimination of destitution within 10 years, as the prime objective, and the lead sector being the rural sector. The Janata party election manifesto sets forth 13 categories of development with emphasis on full employment, appropriate technology, decentralised economy, wage good production for mass consumption, reservation of items for small scale and cottage industries, etc. A preferred tentative plan is "People's Plan No. 2" based on the radical humanist concepts of M. N. Roy. The industrial approach is spelt out in the five objectives of maximisation of production of consumer articles, optimal use of human and material resources, prevention of the concentration of economic power, development of employment intensive industries and making industry responsive to social needs. It is also significant that the AIADMK Government in Tamil Nadu guided by the maxims of the late Annadurai, has shown a similar approach in deciding plan priorities. Discussing specific industries in Tamil Nadu, the author referred to the performance of Sugar, Textiles, Leather and Electronics. The private owned sugar factories are in bad shape on several counts—diversion of cane to jaggery manufacture, diversion of land to paddy cultivation as this is currently more profitable and obsolete machinery. The textile industry, with a large number of sick mills, has been passing through the doldrums in the last 2 or 3 years. The high price and irregular supply of cotton the basic raw material, the inability of the handloom sector, beset with its own problems, to pay a marginally profitable price for yarn, the shift in consumer preference to man-made fibre add up to the need for a change in production mix. The supply of cotton could be regulated by a system of area registration as in the sugar industry. Commenting on the suggestion of handing over some of the sick mills to labour, the author felt that it would not be doing labour a good turn to hand over mis-managed units. The leather iudustry accounting for 20 per cent of the country's foreign exchange earnigs—Tamil Nadu's share being 70 to 75 per cent of the total export—is also a labour intensive sector. Leather processing and manufacture have received, over the years a progressive impetus through the R&D efforts of the CLRI. Further development in this industry should ensure a greater share of profits to indigent labour, encouragement of the use of adaptive technology by the small tanner, extension of industrial and service cooperatives modelled on the

society functioning at Vaniyambadi and export of manufactured articles rather than half-finished leather. In the area of electronics component manufacture, Tamil Nadu has been a late starter and development has been slow. There is considerable potential for expansion, as the State has the basic requirement of skilled manpower. Other States like U.P., Haryana, Punjab, etc. have forged ahead with State Corporations encouraging entrepreneurship in this field. Existing facilities include the Instronics Estate in Adyar and the Functional Industrial Estates at Kakalur, Tiruchirapally, Hosur, Coimbatore, Salem and Madurai. The Japanese example, where electronics is a cottage industry, should serve as a pointer for Tamil Nadu. Some important measures for rapid development of the electronics industry would include the establishment of a State Development Corporation, inclusion of electronics in the school science curricula, establishment of electronic export promotion zone, etc. The State has a large number of registered small industries (36,905 in 1975) with a high degree of territorial concentration in Madras, Chingleput and Coimbatore. The importance of this sector lies in the fact that its development would contribute to rural employment. The functioning of small industries and the maintenance of the tempo of industrial development depend upon the identification and encouragement of the innovative entrepreneur.

In initiating the discussion the Chairman observed that the development of Tamil Nadu industries had to be integrated with the national industrialisation frame and its distinctive contribution worked out. In textiles for instance the majority of our mills were spinning mills and the yarn produced had to find markets in the handloom sector or the other States, while the industry could be reorganised to manufacture finished goods. Referring to two other areas of production, the printing industry and manufacture of teleprinters were mentioned as possible lead sectors which could serve even Asian markets. Electricity generation, which is a must for industrial growth, is subject to high transmission loss, poor plant maintenance, uneconomic operating cost and top heavy establishment charges. In the context of development of industries, reference was made to the innovative housing plans suggested by G. D. Naidu, but not utilised.

It was observed that the paper puts together the policy objectives of the State and Union. The country is on the verge of a change in development strategy. The concepts and instruments spelling out this change have yet to be worked out. Although the major objective of the removal of destitution is similar to "the attack on the worst forms of poverty" enunciated earlier, the 13 point charter of the Janata party and the People's Plan have apparently an anti-industrial bias. In this context a reference was made to the model discussed in the latest U. N. Study "The Future of the World Economy" (1976). For achieving the objective of removal of poverty in ten years there was no escape from accelerated rates of growth, at 7 to 8 per cent and not at 3 to 5 per cent. These high rates of growth cannot be achieved without accelerated industrialisation which entails faster growth of heavy industries as compared to medium and small industries. However, there is no question about the need to intensify investments in agriculture, irrigation and power. To achieve higher investment levels, resources have to be mobilised by higher rates of saving from 11 to 20 per cent, a cutback on consumption levels of higher income groups by 25 per cent and

steeper rates of direct taxation covering the well-to-do farmers also. A rational policy will have to be devised to link cottage and small industries with the medium and large sectors, producing ancillaries and developing the sector as a complementary and not as a substitute sector. In this connection, it was pointed out that the Bhilai steel complex had developed on monolithic lines without ancillaries as against BHEL which has 18 ancillaries without any loss of efficiency. The latter could serve as a preferred model for the Salem steel plant. An omission in the paper was a review of the cement and automobiles industry. Future avenues of development would be shipping, modernised fishing and sericulture. It was observed that industrial development in the State over the last two decades has been high compared to other States. However, a special feature was that industries were mainly housed in Madras, where natural resources endowment is low. Although it is accepted that poverty cannot be eradicated without industrialisation, patterns of industrial production in the country have catered to the demands of the affluent sector and created a defective social frame with concentration of resources and power in the hands of a few. The Janata party charter and programme appears to be a reaction to this. Accelerated growth must be specifically defined and directed in terms of sector and pattern of production. One way of imposing austerity will be to eliminate certain luxury items altogether or reduce their productron. Further, in agriculture, the desired growth cannot be achieved within the existing structural frame. A query was raised whether a diversification of production from cereals to commercial crops would mean greater purchasing power for the rural sector.

After the recent change of Government in the State and at the Centre, future industrial policy and development have yet to be fully spelt out. Such an exercise should include a greater quantum of central investment in Tamil Nadu.

EDUCATIONAL FINANCING*

PART I

Educational Financial Magnitudes and their Rationale

The financing of education involves expenditures of large sums of money, expenditures which have been increasing at a rapid rate in the present century. The absolute amounts involved in the public financing of education and the rate at which it has been growing may be seen in Table 1.

TABLE 1: PUBLIC FINANCING OF EDUCATION

Continents, Major Areas and groups of countries	Public Expenditure on Education in Millions of Dollars			Annual Average Increase		Public Expenditure on Education as % of GNP			Public Expenditure on Education per Inhabitant		
				Of Public Expenditure on Education	Of Gross National Product						
	1965	1970	1972	1965–1972	1965-1972	1965	1970	1972	1965	1970	1972
World Totals(a)	103,601	171,696	222,955	11.6%	9.7%	5.0	5.5	5.7	40.4	60.5	75.6
Africa	1,679	3,005	3,750	12.2%	8.8%	3.5	4.4	4.3	5.5	8.7	10.3
America	43,060	77,218	90,754	11.2%	8.4%	5.2	6.4	6.2	93.6	151.2	170.3
Asia(a)	7,496	12,819	18,890	14.1%	13.3%	3.8	3.5	4.0	6.8	10.2	14.3
Europe	34,719	54,632	77,905	12.2%	10.5%	4.7	5.0	5.3	78.1	118.2	166.1
Oceania	1,057	1,987	2,990	16.0%	8.6%	3.6	4.5	5.8	60.3	102.6	148.0

(a) Not including People's Republic China, Democratic People's Republic of Korea, and Democratic Republic of Viet-Nam.

*Extracts from the first part of the Lead Paper presented by Dr. Malcolm S. Adiseshiah to the Seventh Commonwealth Education Conference of Accra, Ghana at the Commonwealth Secretariat, Marlborough House, London, in March 1977.

TABLE 1: PUBLIC FINANCING OF EDUCATION (Contd.)

Continents, Major Areas and groups of countries	Public Expenditure on Education in Millions of Dollars			Annual Average Increase		Public Expenditure on Education as % of GNP			Public Expenditure on Education per Inhabitant		
				Of Public Expenditure on Education	Of Gross National Product						
	1965	1970	1972	1965–1972	1965-1972	1965	1970	1972	1965	1970	1972
U.S.S.R.	15,590	22,035	28,665	9.1%	8.4%	7.3	6.8	7.6	67.6	90.8	115.6
Developed Countries	95,561	158,942	206,922	11.7%	11.7%	5.3	5.8	5.9	93.4	147.6	188.7
Developing Countries[a]	8,040	12,754	16,033	10.4%	8.8%	3.3	3.5	3.7	5.2	7.2	8.6
Africa (excluding Arab States)	1,078	1,866	2,166	10.5%	8.5%	8.2	3.9	3.6	4.7	7.2	7.9
Northern America	39,742	71,538	83,810	11.3%	8.2%	5.4	6.7	6.6	185.4	314.4	363.1
Latin America	3,318	5,680	6,944	11.1%	9.9%	3.4	3.8	3.6	13.5	20.1	23.0
Asia (excluding Arab States)	7,120	12,233	17,952	14.1%	13.4%	3.8	3.5	3.9	6.6	10.0	14.1
Arab States	977	1,725	2,522	14.5%	10.0%	4.3	5.0	5.7	9.2	14.0	19.4

[a] Not including People's Republic of China, Democratic People's Republic of Korea, and Democratic Republic of Viet-Nam.

(Source: Statistical Year Book, 1974, UNESCO, Paris)

2. It will be seen from the table that world public expenditure in 1972 was $ 223 billion, being 5.7 per cent of world GNP and was increasing during the period 1965–72 at an annual average rate of 11.6 per cent. The rate of increase of educational expenditures for the period 1965–72 was the highest for Asia and the Arab States, the developing countries as a whole spending 3.6 per cent to 5.7 per cent of their GNP on education. The education budget averages 20 per cent of the total national budget of developing countries, with some countries at much higher levels, such as Nigeria at 33.7 per cent, Ivory Coast at 32.2 per cent, Costa Rica at 33.1 per cent and Netherland Antilles at 36.8 per cent. The table below highlights the rapid rate at which educational expenditures are increasing in some developing countries.

TABLE 2: TRENDS IN EDUCATIONAL EXPENDITURE IN SIX DEVELOPING COUNTRIES

(as a Percentage of Gross National Product) (a)

Country	1961			1964			
	Total Expenditure	Of which Capital	Total Excluding Foreign Aid	Total Expenditure	Of which Capital	Total Excluding Foreign Aid	Per Capita GNP in 1964 US $
Congo (Brazzaville)	7.0	0.17	4.5	8.5	0.28	5.5	138
Ivory Coast	4.1 (b)	0.45(b)	3.0(b)	4.3	0.47	3.0	291
Madagascar	5.5	0.27	3.8	7.0	0.84	4.5	120
Niger	1.9	0.28	1.4	2.2	0.29	1.4	77
Nigeria	—	—	2.98(c)	3.93(d)	0.66(d)	3.63(d)	—
Senegal	4.6	0.90	2.6	6.2	0.70	3.8	210

(a) For the five French-speaking countries, the GDP (estimated on the basis of "market prices") has been used. For Nigeria the "factor cost" GDP has been used. This second method of calculation inflates the percentage of GDP allocated to educational expenditure.

(b) 1960 (c) 1958 (d) 1962

(Sources: IIEP Studies and French Ministry of Cooperation)

3. The following table records educational expenditures of the Ministry of Education of 18 Commonwealth countries. As noted, the trends here conform to those summarized earlier.

TABLE 3: PUBLIC EXPENDITURES ON EDUCATION AT CURRENT MARKET PRICES

Country or Area and Currency Unit	Year	Total (Thousands)	As % of Gross National Product	As % of Total Public Expenditure
Australia (Dollar)	1971	1,668,000	4.6	14.0
Canada (Dollar)	1971	7,900,029	8.5	—
United Kingdom				
England and Wales (Pound)	1970	2,521,917	—	—
Northern Ireland (Pound)	1971	92,990	—	22.1
Scotland (Pound)	1971	394,000	—	—
India (Rupee)	1968	8,803,000	2.9	19.7
Sri Lanka (Rupee)	1970	544,382	4.2	13.4
Nepal (Rupee)	1971	77,600	0.8(d)	8.4
Ghana (New Cedi)	1971	115,534	4.6(d)	33.7
Nigeria (Naira)	1970	192,732	3.5	33.7
Sierra Leone (Leone)	1969	10,263	2.8	17.9
Mauritius (Rupee)	1971	42,403	3.7	11.0
Jamaica (Pound)	1969	39,151	4.5	18.5
Trinidad (Dollar)	1970	62,143	3.7(b)	—
Malaysia				
Sabah (M. Dollar) (a)	1971	30,028	—	—
Sarawak (M. Dollar) (c)	1971	33,471	—	—
West Malaysia (M. Dollar)	1971	645,848	6.4	10.8
New Zealand (Dollar)	1971	337,000	5.4	15.4
Kenya (Shilling)	1971	571,160	4.4(d)	15.8
Uganda (Shilling)	1970	361,646	4.3	17.8
Papua New Guinea (Aus. Dollar)	1971	42,847	7.6	20.4
Singapore (Dollar)	1970	184,492	3.1	11.7

(a) Expenditure of the Ministry of Education only.
(b) As percentage of Gross Domestic Product at factor cost.
(c) Central or Federal Government only.
(d) As percentage of Gross Domestic Product at market prices.

(Source: Statistical Year Book, 1974 (p. 845) UNESCO, Paris)

4. Another feature of educational financing in developing countries is that the share of private expenditures on education, whether it be contributions from private individuals, endowments or institutions or fees paid by students, is both small and on the decline. In Singapore for instance it was 26 per cent in 1951 and 3 per cent in 1955, in Malaysia 42 per cent in 1946 and 19 per cent in 1955, in India 20.4 per cent in 1950 and 15.3 in per cent 1965 and 10 per cent in 1970. (1)

5. One question that thus arises is the reason for the public financing of education which is gradually becoming total financing in the developing countries. This question has occupied the attention of economics rather seriously over the past two decades. At the start of this twenty-year period, the justification for the large and growing public expenditures on education was attempted in terms of the high returns on the investment in human capital which they were held to represent. More recently this rates of return approach has been running into trouble. There are basic unanswered questions which have been posed. Educational expenditures are not only a form of human investment which increases further earning capacity, they also enable the person concerned to satisfy present needs. This investment and consumption effect of educational expenditure on the same person makes impossible, the separate analysis of the effects of such expenditures as investment and consumption. There is an even more serious question that is being posed about the rate of returns approach. As against the view, to which I subscribe, that education increases future earnings through increasing one's productivity is the view that education is merely a market signal or filter which classifies persons, that it is at best a predictor of productivity, not an assurer of productivity

6. These basic questions are posed with regard to education and educational expenditures in industrialized countries like the United Kingdom, Canada, Australia, New Zealand, the United States or France, countries with a relatively assured educational and economic data base. When attention is turned to the developing Commonwealth countries like India, Nigeria, Ghana, Jamaica or Sri Lanka with their poor data base and their inbuilt margins of error, any attempt to explain educational expenditures in terms of rates of return becomes even more difficult. In the educational finance analysis attempted for these countries, average costs rather than marginal costs, average returns rather than marginal returns are used in the empirical studies. Time series projections are made with cross section data and the problem of allowing for productivity series is almost impossible.

7. Hence there is a return to what are called the social benefits of education as the prime justification for the large public subsidizing of education. I say return, because that is what Adam Smith left us with 200 years ago. He, who was against state intervention in personal and social life except in certain well-defined

(1) E. Lobee, Probleme du Financement De leducation, in Readings in the Economics of Education—UNESCO, Paris, 1968;

Education and National Development. Report of the Education Commission 1964-66, New Delhi—1967.

spheres, established education as one area where the state should intervene with finance, not because it develops skills but because of what he called the moral and civic improvement that it brings about in the people. In his graphic language he set forth the moral thus: "The state derives no inconsiderable advantage from their (the peoples) instruction. The more they are instructed, the less likely they are to the delusion of enthusiasm and superstition, which among ignorant nations, frequently occasion the most dreadful disorders. An instructed and intelligent people, besides, are always more decent and orderly than an ignorant and stupid one. They are more disposed to examine and more capable of seeing through, the interested complaints of faction and sedition and they are upon that account, less apt to be misled into any wanton or unnecessary opposition to the measures of government." ([2])

8. The question then may be posed as to whether we are on relatively firm ground in using the concept of the social benefits of education as the reason for the large public expenditures on education. These social benefits can be considered under seven broad heads:

(a) improved income distribution and increased social mobility;

(b) changes in attitudes and values;

(c) credible political leadership;

(d) lower unemployment;

(e) improved mix of manpower skills;

(f) enhancement of the productivity of physical capital; and

(g) increased quantity and improved quality of research.

Some comments on each of these benefits may be attempted.

9. The first is the benefit of improved income distribution and increased social mobility as a result of the spread of education made passible by large expenditures of public funds on education. The general trend of education as a necessary condition for promoting equality, for widening the number of people drawn into its net, for encompassing social groups which have been kept out of education—may be conceded. Whether this leads to improved income distribution, however, depends on assuring that public educational expenditures, lower tuition fees and so attract students from low income groups who as a result of their education will earn higher incomes than their uneducated or less educated parents. In this argument, there are two further assumptions. First lower tuition fees or no fees will attract students from low income groups. This depends on the opportunity cost that such students face in attending school or university. Experience in developing countries seems to indicate that the opportunity cost is high and no lowering of tuition fees can make up for the income foregone. This is at this stage a hunch. There is need for empirical studies to bring out the facts. The other assumption is that education leads to higher earnings and that higher education will result in still higher income. The general conclusion is that the redistribution effect or social mobility effect of

(2) Adam Smith—Wealth of Nations, New York, 1937.

public expenditure on education remains to be proved and cannot at this stage be counted as a benefit to justify the magnitude of such expenditures.

10. A second social benefit is the change in attitudes and values that education brings about in people, as Adam Smith points out, and used as the reason for justifying the public financing of education. Education develops qualities of the desire to improve oneself, to be open-minded, to experiment and change, to reason and judge for oneself, to be a better member of the local community and an intelligent citizen. These results of education are undeniable, but two problems must be faced. First some of these attitudinal changes like the desire to better oneself or the capacity for reasoning and analysis are not really social benefits. They are individual gains which may have social cost such as when a primary school completer refuses any non–white collar job, adding to the country's unemployment which is a social disbenefit growing from education, or when a graduate accepts any clerical post which makes for stagnation of the economy. The second problem is more serious—granted that there is a large residue of this kind of social benefit in the form of attitudinal and value changes induced by education, the fact that in the developing Commonwealth countries the majority of adults are kept out of education and only a minority have access to higher levels of education means that the large public financing of education is not productive of social benefits to the majority of its peoples.

11. The third social benefit refers to improved public leadership that education makes available. It is true that educated persons in our countries exercise political leadership roles and that education is a necessary condition for discharging such roles. But looking around our countries, we should ask whether the quality of political ambition and / or the financial capacity to invest in the political process are not the sufficient condition as much as education is the necessary condition for political leadership.

12. The other social benefits of education raise similar questions. In the developing Commonwealth countries, while education makes possible a better mix of manpower skills, provides a base for developing a research and development system needed by the economy, and through vocational and technical education programmes improves the productivity of land and other physical assets, there is need for empirical studies to substantiate these guesses and recognition of the growing and wasteful marginalization of so much of science and technology in the countries. Also the co-existence of an expanding educational system and growing educated unemployment makes it difficult to establish a simple correlation between education and employment.

13. The moral drawn from this part of the analysis is that the basis for the large and growing public financing of education must be found in the social factor that private financing, the market forces, cannot produce the education needed by the country because of the divergences between private and social costs and benefits, the non–market forces that are at work in every society—the demonstration effect of the co–existence of high levels of education and high levels of living intra-nationally and internationally, the human rights and the consumption imperatives of education—all these together explain the political decision of the large and growing public financing of education.

Private Financing

14. The prospects of private financing of education (in the developing Commonwealth countries) as noted earlier, are not very bright. This source of educational finance divides itself into (a) contribution by voluntary bodies; (b) income from fees; and (c) parental expenditure on text books, stationery and co-curricular activities. Some analysis of each source is needed.

15. Contributions from voluntary bodies towards educational expenditures formed a major source of educational finance in all countries, in particular in the developing Commonwealth countries, before their independence. In these latter countries, they have now ceased to be of significance, forming somewhere between 1 and 5 per cent of total educational expenditures today. (3) Endowments have lost around 50 per cent of their real value as a result of inflation, at first creeping, more recently galloping, in the last two decades. Also the sources of domestic private philanthropy have have been gradually drying up in the countries, with the extension of public regulation, control and ownership of all forms of assets. Thus voluntary contributions cannot be counted upon as a source of educational finance in developing countries.

16. Income from fees still continues to be a rather important means of financing education particularly at the secondary and post-secondary levels. The following table illustrates the place of fees collection in one Commonwealth country.

It will be seen that fees contribute over 17% to total educational expenditures and in monetary terms the absolute amounts have more than doubled between 1950-51 and 1960-61 from Rs.233 million to Rs. 540 millions and is estimated to have doubled again to Rs. 1 billion by 1965-66. Further over one third of the expenditures are financed from fees at the pre-primary, secondary and higher education levels. It is interesting to note that the budgeting of fees started in this country not as an educational financing device, but as an expression of the principle that "people do not value anything that is given free, that the payment of a fee is an indication of the seriousness of purpose on the part of a student or his guardian". (4) The next rather quick transition was the use of fees as a means of financing the educational system. On this, there are sharply differing views. Most developing countries regard fees as "the most regressive form of taxation", falling more heavily on the poorer classes who are the majority of society and acting as an anti-egalitarian force. Any attempt to collect fees from students from the well-to-do section alone runs up against the problem of administrative feasibility. (5) On the other hand, it is pointed out that fees are a means of recouping costs of education, since the latter's benefits will be rapidly felt by families to whom education is given, and "the poverty of

(3) Economic Bulletin for Asia and the Far East, September 1963, Bangkok; Ekba Gomez de Ruy de Kybal: The Economics of Education in Education in World Perspective, New York, 1962.

(4) From the 1854 Wood's Education Despatch quoted by the Report of the Education Commission, 1964-66, New Delhi.

(5) Directorate of Rural Development, Tamil Nadu, India, 1975. Ibid page III

TABLE 4

FEES IN EDUCATION (1960-61)

Stage–object	Total Amount Collected Through Fees (Rs. 000's)	Percentage of Students Paying Fees	Average Annual Fee Collected Per Student (Rs.)	Percentage of Fees to Total Expenditure on the Stage	Percentage of Fees Collected at the Stage to Total of Fees Collected at all Stages
Pre–Schools	2,184	77.5	23.3	37.2	0.4
Lower Primary Schools	17,169	3.9	16.4	2.3	2.9
Higher Primary Schools	31,677	16.4	18.2	7.4	5.4
Secondary Schools	270,394	64.8	55.6	39.2	45.8
Schools for Teacher Training	1,856	20.0	84.2	5.3	0.3
Schools for Vocational Education (excluding Teacher Training)	13,604	72.0	65.0	17.2	2.3
Schools for Special Education	1,378	10.0	8.1	4.3	0.2
University Teaching Departments	52,934	90.1	—	37.4	9.0
Research Institutions	375	86.3	147.1	1.4	0.1
Colleges for Teacher Training	2,761	34.7	156.9	12.8	0.5
Colleges for Arts & Science	101,384	84.9	172.7	48.5	17.2
Colleges for Professional Education (excluding Teacher Training)	30,346	87.9	240.5	22.2	5.1
Colleges for Special Education	1,447	52.4	109.0	15.9	0.2
All Institutions	527,510	18.7	—	20.7	89.4
Boards of Education	23,342	—	—	96.7	3.9
Indirect Expenditure	39,406	—	—	1.7	6.7
Grand Total	590,258	—	—	17.1	100.0

(Source : Report of the Education Commission, New Delhi, 1964–66)

the present quickly followed by education induced affluence". For the developing countries in particular, the individual returns on education are likely to be high and short-term, and even if the benefits accrue to succeeding generations, the extended family system acts as a corrective to inter-generational inequities, as the family is a continuing unit. ([6]) There is thus a mix of economy and equity arguments on the question of fees as a source of educational finance. A general conclusion is that, provided scholarships are provided for students from the poor and vulnerable sector of society, fees at the secondary and post-secondary levels of education should be levied in the developing Commonwealth countries, at least till such time as these educational levels cease reflecting the class bias that they do. In the country to which the table refers for example 80% of students in higher education are from the top 20% of its society. ([7]) There is really no case for not levying fees at these levels to cover 50-60 per cent of recurrent costs.

TABLE 5

PRIVATE COSTS OF EDUCATION PER STUDENT (ANNUAL) 1965-66

(In Rupees)

	LOWEST			HIGHEST		
Class	Textbooks	Stationery	Total	Textbooks	Stationery	Total
I	0.50	0.60	1.10	17.80	12.80	30.60
II	0.54	0.60	1.14	16.60	12.80	29.40
III	0.69	2.11	2.80	28.51	8.33	36.84
IV	2.10	3.26	5.36	38.85	14.50	53.35
V	3.91	2.40	6.31	36.10	14.50	50.60
VI	5.85	4.63	10.48	43.24	60.00	102.04
VII	7.29	4.88	12.17	47.09	75.00	112.09
VIII	9.30	6.95	16.25	169.68	21.40	191.08
IX	11.15	7.51	18.66	192.55	70.00	262.55
X	4.50	14.00	18.50	216.35	70.00	286.35
XI	13.75	11.25	25.00	189.65	70.00	259.65

(Source: Report of the Education Commission, New Delhi—1964-66)

In another Commonwealth country ([8]), a study of transport and school uniform costs per student is summarized in the following table: (in shillings)

(6) J. Vaizey : The Financial Implications of the Mediterranean Regional (Paris) Project in OECD's Financing of Education for Economic Growth—OECD 1968.

(7) Field Studies in the Sociology of Education, NCERT New Delhi, 1971.

(8) Uganda - Educational Cost Valuation in IIEP's Education Cost Analysis in Action, Cost Studies for Planners III 1972 IIEP, Paris.

17. The third component of the private financing of education is the parental expenditure on books, stationery, school uniforms, transportation etc. It is difficult to quantify this part of private financing but what evidence there is shows that this is a sizeable, if widely varying, part of the total financial picture. A study in one country of these costs is summarized in Table 5 above:

TABLE 6

Category	School						
	A	B	C	D	E	F	G
Transport	17.88	9.3	36.14	14.62	59.00	50.19	68.14
School Uniform	55.54	61.16	6.83	92.80	69.00	65.85	8.73

(Source: Working Pay for Secondary Schools Cost Survey, Uganda.)

The impression conveyed by these admittedly partial and spotty evidence is that these other costs of education form a substantial part of total educational costs, provide an inducement to escape them for the vast majority of families in the developing countries who are the poverty sector (as seen in the low range at one end) and might be a causal factor for the declining quality of education at the secondary and post-secondary levels. To counter these trends some public subsidizing of textbooks, paper and school uniforms is indicated.

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